KENWOOD

UD COMPONENT SYSTEM/COMPACT HI-FI SYSTEM

UD-952

INSTRUCTION MANUAL

KENWOOD CORPORATION

COMPACT disc DIGITAL AUDIO

For your records

Record the serial number, found on the back of the unit, in the spaces designated on the warranty card, and in the space provided below. Refer to the model and serial numbers whenever you call upon your dealer for information or service on the product.

Model_____ Serial Number_____

B60-1795-00 (JA) (K, P, E, T, M, X) MC
95/12 11 10 9 8 7 6 5 4 3 2 1 94/12 11 10 9 8 7

2 Unpacking

Unpack the unit carefully and make sure that all accessories are put aside so they will not be lost.
Examine the unit for any possibility of shipping damage. If your unit is damaged or fails to operate, notify your dealer immediately. If your unit was shipped to you directly, notify the shipping company without delay. Only the consignee (the person or company receiving the unit) can file a claim against the carrier for shipping damage.
We recommend that you retain the original carton and packing materials for use should you transport or ship the unit in the future.

Before applying power

Units are designed for operation as follows.

U.S.A. and Canada ..... ***120 V only***
U.K. and Australia ..... ***240 V only***

Europe (Except for U.K.) ..... ***230 V only***
****Other countries*** ..... ***110-120 / 220/230-240 V switchable***

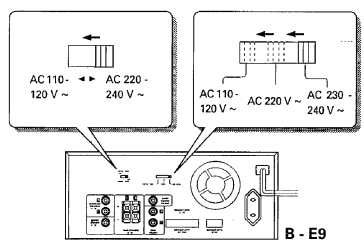
For the United Kingdom

Factory fitted moulded mains plug

1. The mains plug contains a fuse. For replacement, use only a 13-Amp ASTA-approved (BS1362) fuse.
2. The fuse cover must be refitted when replacing the fuse in the moulded plug.
3. Do not cut off the mains plug from this equipment. If the plug fitted is not suitable for the power points in your home or the cable is too short to reach a power point, then obtain an appropriate safety approved extension lead or adapter, or consult your dealer.
   If nonetheless the mains plug is cut off, remove the fuse and dispose of the plug immediately, to avoid a possible shock hazard by inadvertent connection to the mains supply.

**AC voltage selection*

The AC voltage selector switches Type A and Type B on the rear panel are set to the voltage that prevails in the area to which the unit is shipped. Before connecting the power cord to your AC outlet, make sure that the setting position of these switches matche your line voltage. If not, it must be set to your voltage in accordance with the following direction.



B - E9

Note:
Our warranty does not cover damage caused by excessive line voltage due to improper setting of the AC voltage selector switches.

Safety precautions

WARNING : TO PREVENT FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

CAUTION RISK OF ELECTRIC SHOCK DO NOT OPEN	CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE, REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.
	THE LIGHTNING FLASH WITH ARROWHEAD SYMBOL, WITHIN AN EQUILATERAL TRIANGLE, IS INTENDED TO ALERT THE USER TO THE PRESENCE OF UNINSULATED "DANGEROUS VOLTAGE" WITHIN THE PRODUCT'S ENCLOSURE THAT MAY BE OF SUFFICIENT MAGNITUDE TO CONSTITUTE A RISK OF ELECTRIC SHOCK TO PERSONS.
	THE EXCLAMATION POINT WITHIN AN EQUILATERAL TRIANGLE IS INTENDED TO ALERT THE USER TO THE PRESENCE OF IMPORTANT OPERATING AND MAINTENANCE (SERVICING) INSTRUCTIONS IN THE LITERATURE ACCOMPANYING THE APPLIANCE.

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Sound enhancement CD (1)

FM indoor antenna (1)

Parallel cord (Thick) (1)

Parallel cord (Thin) (1)

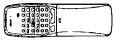
AM loop antenna (1)

Loop antenna stand (1)

Antenna adaptor (1)
(For U.K. and Europe)

Speaker cords (2)

Remote control unit (1)



AC plug adaptor (1)
(Except for some areas.)

For the unit with a European AC plug in areas other than Europe.

Batteries (R03/AAA) (2)

Magazine (1)

This accessorie is packed with the CD player.

Caps (8)

(To be used when installing the optional OMNI-A5 omni speakers onto the front speakers.)

The marking of products using lasers (Except for some areas)

CLASS 1
LASER PRODUCT

The label is attached to the rear panel and says that the component uses laser beams that have been classified as Class 1. It means that the unit is utilizing laser beams that are of a weaker class. There is no danger of hazardous radiation outside the unit.

Unit destination	Shape of the AC outlet
U.S.A.,Canada and U.S. Military	
U.K.	
Australia	
Europe and Other countries	

For the U.S.A.

CAUTION:

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

In compliance with Federal Regulations, following are reproductions of lables on, or inside the product relating to laser product safety.

KENWOOD CORPORATION
2967-3, ISHIKAWA-CHO,
HACHIOJI-SHI,
TOKYO, JAPAN

KENWOOD CORP. CERTIFIES THIS EQUIPMENT CONFORMS TO DHHS REGULATIONS NO. 21 CFR 1040. 10, CHAPTER I, SUBCHAPTER J.

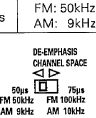
Location: Back Panel

FM DE-EMPHASIS/CHANNEL SPACE switch (Except for some areas)

The FM DE-EMPHASIS/CHANNEL SPACE switch on the rear panel is set to the correct setting that prevails in the area to which the unit is shipped. However, if the FM DE-EMPHASIS/CHANNEL SPACE setting is not matched to the area where the unit is to be used; for instance, when you move from area 1 to area 2 or vice versa, desired reception of AM/FM broadcasts is not expected. In this case, change the FM DE-EMPHASIS/CHANNEL SPACE setting in accordance with the area corresponding to the table. The FM DE-EMPHASIS is switched over at the same time.

- When changing the setting of the FM DE-EMPHASIS/CHANNEL SPACE switch, first disconnect the power cord, then reset the channel space switch, connect the power cord again, and turn the power on.

	Area	CHANNEL SPACE freq.	FM DE-EMPHASIS
1	U.S.A., Canada, and South American countries	FM: 100kHz AM: 10kHz	75µs
2	Other countries	FM: 50kHz AM: 9kHz	50µs



Special feature

Convenient DPSS

The DPSS (Direct Program Search System) allows you to play a cassette tape with a variety of playback functions like a CD.

Playing tunes by skipping some.
Playing a single tune repeatedly.
Rewinding a tape and playing from the beginning.
Playing a tape by skipping blanks between tunes.

3DEnvironmental Sound System

Different sounds of different sources can be played through the main and omni speakers.

Play the provided Sound Enhancement CD through the OMNI speakers (optional) and play music through the main speakers, and you'll experience a completely new world of music. Naturally, any other combinations of sound sources are possible.

Simplified CD recording

Various CD editing & recording features are available for selection according to the tape you want.

Fade edit recording: Recording CD tracks sequentially from No. 1.
Program edit recording: Recording desired CD tracks in desired order.
Timed edit recording: Recording CD tracks within the specified tape length so that no track is interrupted in the middle.
AI edit recording: Recording all CD tracks even in case the total playing time exceeds the total recording time of tape.
X.FADE (Cross-fade) edit recording: Recording by overlapping the beginnings and endings of the CD tracks.

Source direct playback

The reproduced sound can be played with infinite purity without any additional manipulation of the tone.

Versatile tone adjustment

The improved graphic equalizer feature allows automatic curve setting with AI (Artificial Intelligence) as well as user's selection or even creation of desired curves. Up to 5 user-created curves can be stored in preset memory.

Live, being-there sounds of presence effects

DOLBY SURROUND ***playback is a matter of course. In addition, sound can be reproduced in KENWOOD original sound fields and the depth of sound can be adjusted as desired. You can enjoy music in a sound field you like.***

Convenient timer functions

In addition to the possibility of storing up to 4 timer programs in memory, the following functions are available.

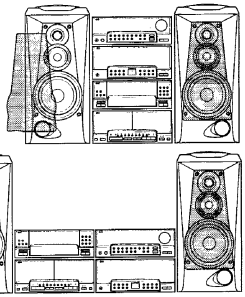
AI TIMER1: When the power is turned ON by the timer, the sound increases gradually.
AI TIMER2: When the power is turned ON by the timer, two CD tracks are played first, then radio is received after it.
Sleep timer: Useful when you want to go asleep while listening to music.
One-touch timer: The power can be turned ON at an approximate time, without the need of the fine time adjustment operations.

System connections

Do not plug the power cord into the power outlet until all of the required connections have been made.

- When arranging the system units in a vertical, stacked configuration, observe the stacking order indicated in the system connection diagram below.
- In case an associated system component is connected, also read the instruction manual of the component.
- Align the front panels of the unit flush.

When arranging the system in a horizontal configuration, be sure to place the preamplifier/tuner unit + power amplifier/graphic equalizer unit on the right side of the CD player unit + cassette deck unit.



(For U.K. and Europe)

Ventilation fan
The fan rotates during high-power reproduction. To allow the ventilation, install the component by reserving a certain distance between its rear and the wall.

AC voltage selector (except for some areas) Refer to page 2.

FM DE-EMPHASIS/CHANNEL SPACE switch (except for some areas). Refer to page 4.

Preamplifier/tuner unit C-E9 (or C-E9L)

The wire with white line should come to the left.

Power amplifier/ graphic equalizer unit B-E9

CD player unit DP-ME9

Cassette deck unit X-E9

Parallel cord (Thin)

To wall AC outlet

Refer to page 4.

Parallel cord (Thick)

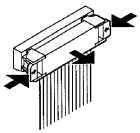
Digital output jack
Remove the cap before using this jack.

Remove cap

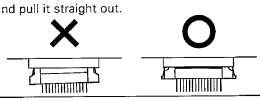
Optical fiber cable (optional)

To MD recorder (optional) (This connection cord is not provided.)

Connection of parallel cord



- When connecting the parallel cord, insert the plug straight into the connector until it clicks to lock them securely.
- When connecting the parallel cord, the wire with white line should come to the left side end.
- When disconnecting the parallel cord, push in the two sides of the plug and pull it straight out.

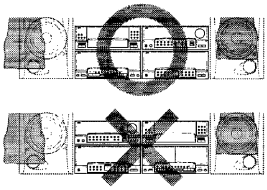


Notes

1. Be sure to insert all connection cords securely. If their connections are imperfect, the sound may not produced or noise may interfere.
2. Before plugging or unplugging a connection cord, be sure to unplug the power cord from the wall AC outlet. If connection cords are plugged or unplugged with the power cord left plugged in, malfunction or damage may result.
3. Do not connect up a power source whitch is larger than that indicated on the socket at rear of the unit.

Caution

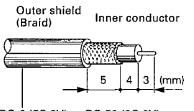
When installing the system components in a horizontal cofiguration, place the preamplifier/tuner unit (C-E9) and power amplifier/graphic equalizer unit (B-E9) to the right of the CD player unit (DP-ME9) and cassette deck unit (X-E9) as shown in the connection diagram.
Do not place the CD player and cassette deck to the right of the power amplifier/graphic equalizer unit, for this will lead to overheating or malfunction.



Connection of antenna adapter (U.K. and Europe only)

① Strip the cable coating.

When coaxial cable is used

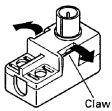


RG-6 (5C-2V) or RG-59 (3C-2V)

When the provided simplified antenna is used

Remove the vinyl coating and twist conductors.

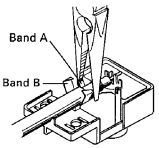
② Open the antenna adaptor.



Open the claws with the fingers to release the lock and pull out the cover.

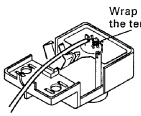
③ Attach the cable and close the cover.

When coaxial cable is used



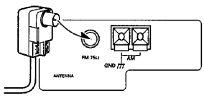
Insert the cable into the slit on the clip. Fasten bands A and B using a pair of pliers.

When the provided simplified antenna is used



Insert the antenna cord tip into the slit on the hardware and wrap the cord around it.

④ Connect the adaptor to the antenna terminal.



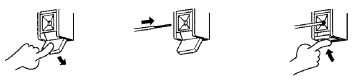
Optical fiber cable connection

The digital OPTICAL output is designed for use in the connection with an MD recorder (optionally available). The digital signal transmission allows you to record the CD sound on MD without spoiling the high sound quality. This jack can also be connected to an amplifier equipped with a digital optical input (optical fiber).

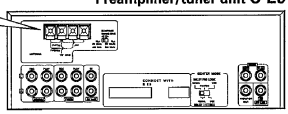
- When using an optical fiber cable to connect this unit to a MD recorder or digital amplifier, insert the plug straight into the jack until a snap sound is heard.
- Be careful not to bend, coil or bundle the optical fiber cable.
- Optical fiber cables available in audio accessory stores may not always be able to be used with this unit. If your cable cannot be used with this unit, consult the store from which you purchased the cable or your nearest dealer.

Connection method

① **Push the lever.** ② **Insert cord.** ③ **Return the lever.**



Preamplifier/tuner unit C-E9



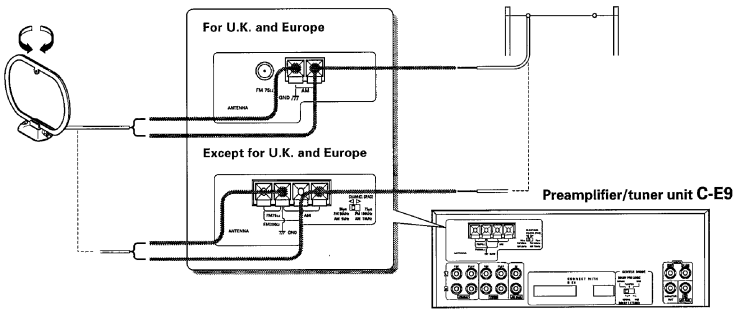
Connection of AM antenna

Connection of AM loop antenna

The provided antenna is for indoor use. Place it in a position as far as possible from this system, TV, speaker cords and power cord and set to the orientation which provides the best reception condition.

Connection of AM outdoor antenna

If the reception condition is poor with the loop antenna alone, connect a vinyl coated wire of more than 6 m (20 ft) and extend it outdoors while leaving the loop antenna connected.



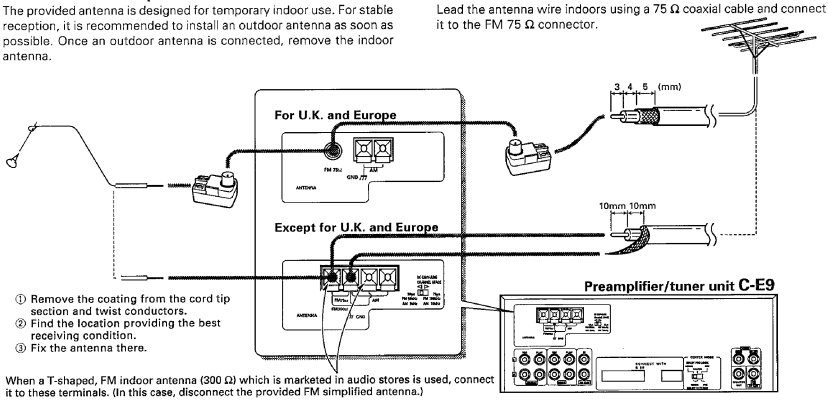
Connection of FM antenna

Connection of FM simplified antenna

The provided antenna is designed for temporary indoor use. For stable reception, it is recommended to install an outdoor antenna as soon as possible. Once an outdoor antenna is connected, remove the indoor antenna.

Connection of FM outdoor antenna

Lead the antenna wire indoors using a 75 Ω coaxial cable and connect it to the FM 75 Ω connector.

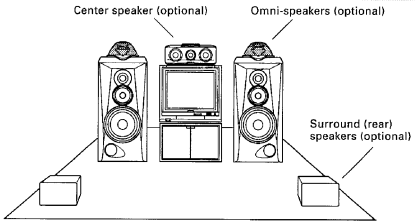


① Remove the coating from the cord tip section and twist conductors.
② Find the location providing the best receiving condition.
③ Fix the antenna there.

When a T-shaped, FM indoor antenna (300 Ω) which is marketed in audio stores is used, connect it to these terminals. (In this case, disconnect the provided FM simplified antenna.)

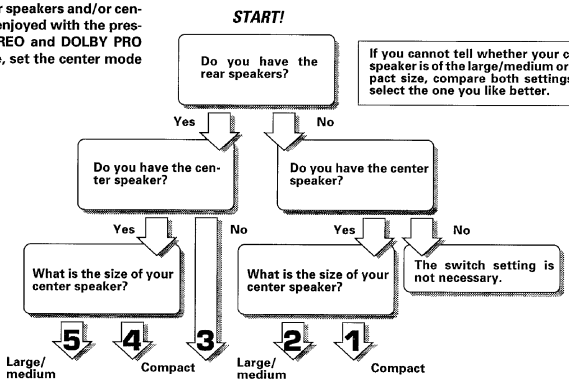
Connection of speakers

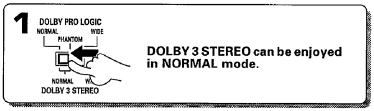
Arrangement of speakers



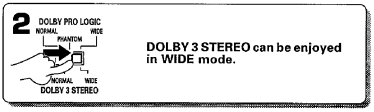
Setting the center mode

By connecting the optional rear speakers and/or center speaker, the music can be enjoyed with the presence effects of DOLBY 3 STEREO and DOLBY PRO LOGIC. Before using this mode, set the center mode switch referring to below.

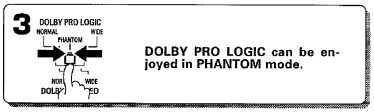




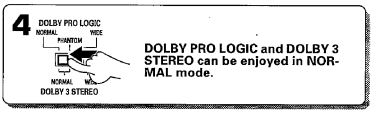
DOLBY 3 STEREO can be enjoyed in NORMAL mode.



DOLBY 3 STEREO can be enjoyed in WIDE mode.



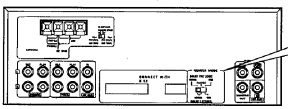
DOLBY PRO LOGIC can be enjoyed in PHANTOM mode.



DOLBY PRO LOGIC and DOLBY 3 STEREO can be enjoyed in NORMAL mode.

DOLBY PRO LOGIC and DOLBY 3 STEREO can be enjoyed in WIDE mode.

Preamplifier/tuner C-E9

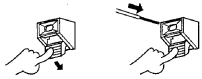


- The set contents may sometimes be initialized to the original setting after the power cord is unplugged and plugged again.

Connection of the front speakers

Speaker rear panels

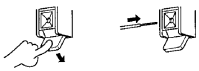
① While pushing and holding the lever... ② Insert cord.



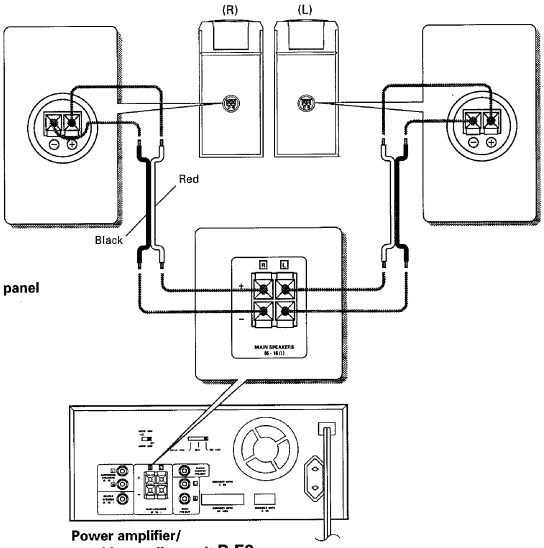
③ Release the lever.

Power amplifier/graphic equalizer rear panel

① Push the lever. ② Insert cord.



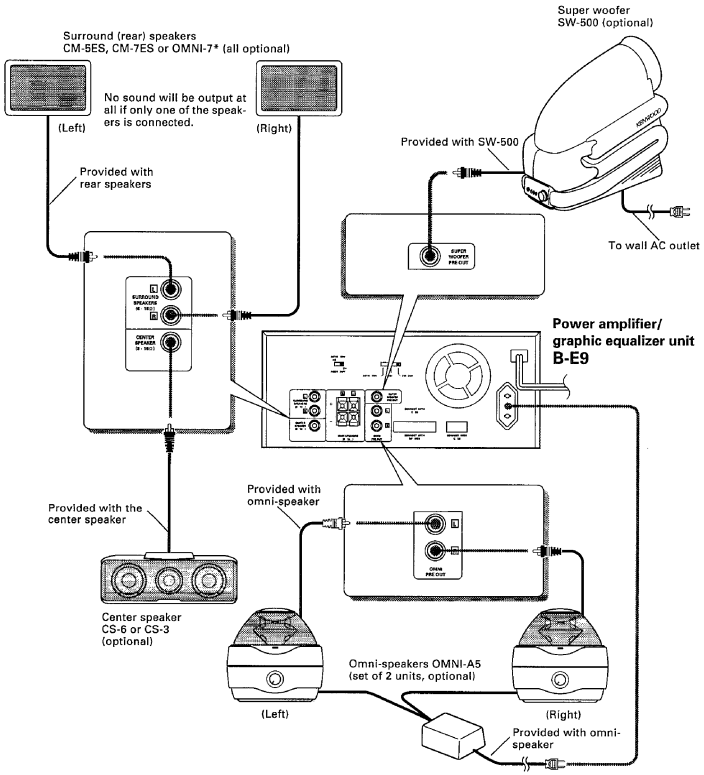
③ Return the lever.



Power amplifier/ graphic equalizer unit B-E9

- Never short-circuit the + and – speaker cords.
- If the left and right speaker connections or the + and – polarity are inverted, the sound will be unnatural with unclear positioning of musical instruments, etc. Be sure to connect them without mistake.

Connection of optional speakers

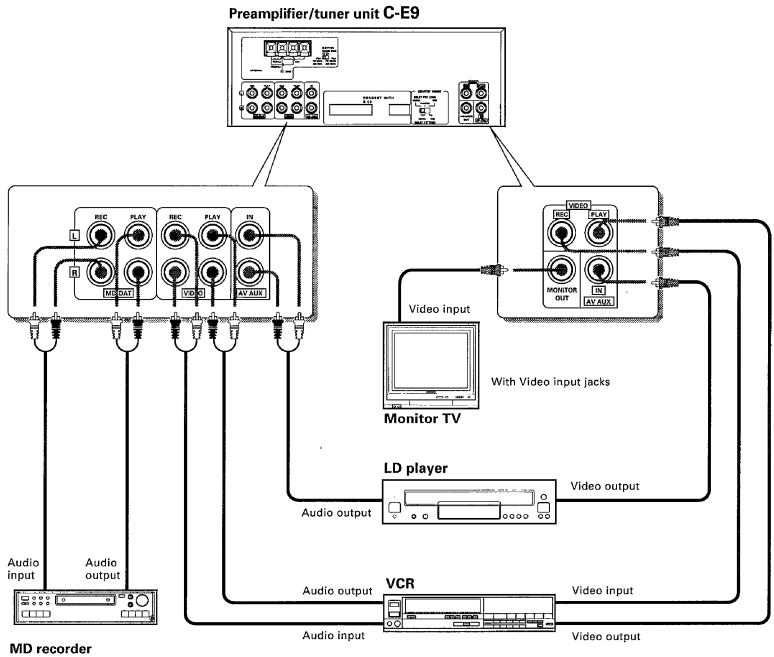


*:This option may not be available in some areas.

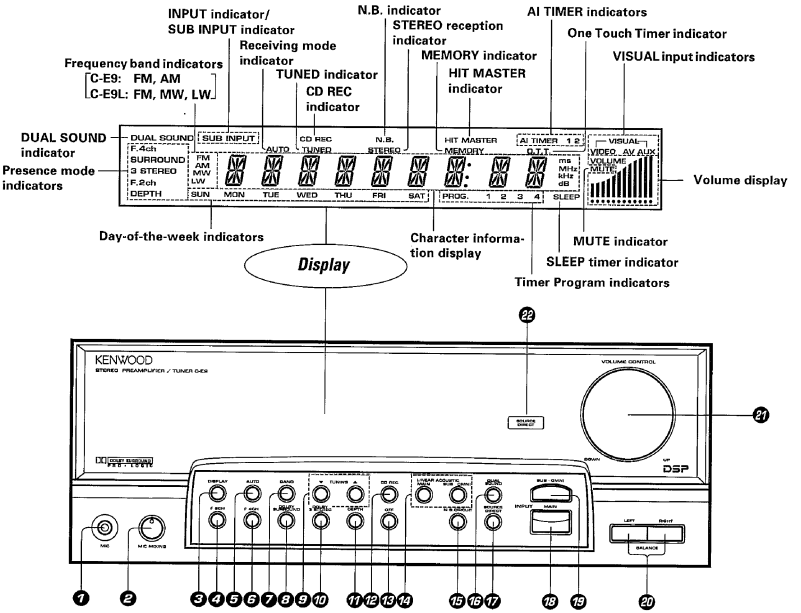
- Set the Volume controls of the omni-speakers (OMNI-A5) to the center positions.
- For the combination of the omni-speakers (OMNI-A5) with the front speakers, refer to the instruction manual provided with the OMNI-A5.

Connection of Audio / Visual components (optional)

- Connection cords are not supplied with this system.
- Any of the following video equipment can be connected in place of the LD player.
  - DBS tuner
  - Video camera
  - Video recorder
- A DAT recorder can also be connected in place of the MD (Mini Disc) recorder.



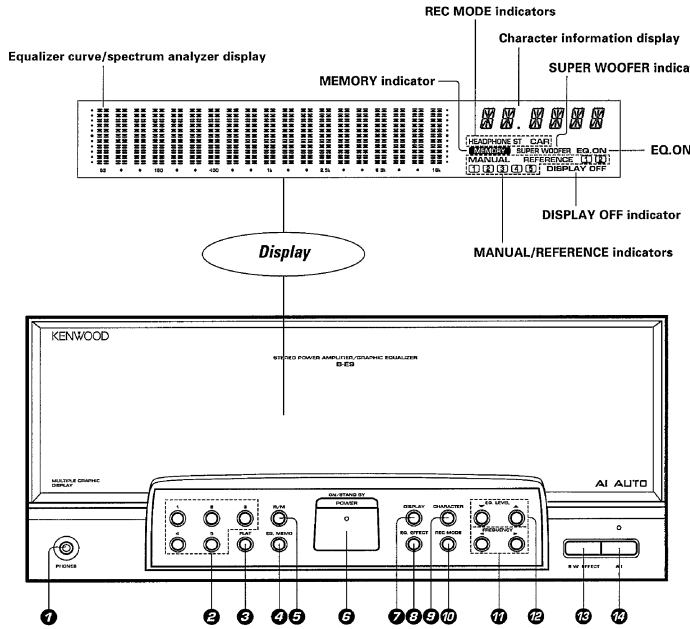
Preamplifier/tuner unit



1 MIC jack → P. 69
2 MIC MIXING control → P. 69
Turn to adjust the microphone input volume.
3 DISPLAY key → P. 34
Press to change over the display contents.
4 F.2CH key → P. 60
5 AUTO key → P. 34
Press to receive stations in auto tuning mode.
6 F.4CH key → P. 60
7 BAND key → P. 34
Press to select the required frequency band.
8 DOLBY SURROUND key → P. 68
9 TUNING (▼, ▲) keys → P. 34
Press to select the station to be received.
10 DOLBY 3 STEREO key → P. 69
11 DEPTH key → P. 64
Press to adjust the feeling of depth of the sound.
12 CD REC key → P. 52
Press to record a CD while playing another source.
13 OFF key
Press to switch the surround and presence modes OFF.

14 LINEAR ACOUSTIC (MAIN, SUB-OMNI) keys → P. 20
Press to adjust the volume balance between the main speakers and OMNI speakers (optional).
15 N.B.CIRCUIT key → P. 21
Press to adjust the bass sound.
16 DUAL SOUND key → P. 39
Press for environmental sound play.
17 SOURCE DIRECT key → P. 21
Press to play music without additional tone manipulation.
18 MAIN INPUT key → P. 24
Press to select the component to be played.
19 SUB-OMNI INPUT key → P. 38
Press to select the component to be played through the OMNI speakers (optional) for environmental sound play.
20 BALANCE (LEFT, RIGHT) keys → P. 21
Press to adjust the volume balance between the left and right speakers.
21 VOLUME CONTROL knob → P. 21
22 SOURCE DIRECT indicator
Lights when the SOURCE DIRECT function is ON.

14 Power amplifier/graphic equalizer unit



❶ **PHONES jack** → P. 20

❷ **Preset keys (1 to 5)** → P. 56

❸ **FLAT key** → P. 57
Press to make the equalizer curve flat.

❹ **EQ.MEMO key** → P. 57
Press to store an equalizer pattern in memory.

❺ **R/M key** → P. 56
Press to switch the equalizer curves to be recalled between Reference and Manual curves.

❻ **POWER key** → P. 20
Press to turn the power ON/OFF.

❼ **DISPLAY key** → P. 54
Each press changes the display contents in order from graphic equalizer to spectrum analyzer, demonstration and display OFF.

❽ **EQ.EFFECT key** → P. 56
Press to switch the equalizer effect ON/OFF.

❾ **CHARACTER key** → P. 54
Each press changes over the spectrum analyzer display modes.

❿ **REC MODE key** → P. 58
Press when recording a tape to be played on a car stereo or headphone stereo.

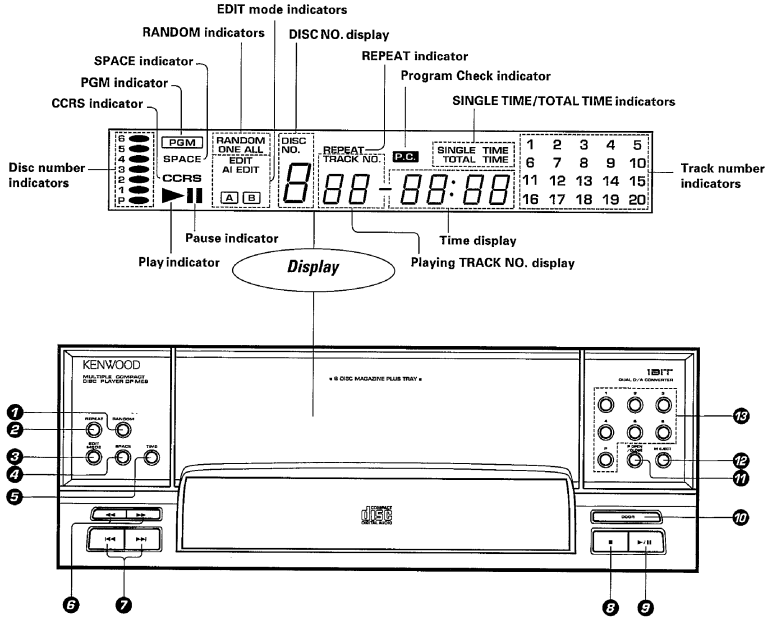
⓫ **FREQUENCY (◄, ►) keys** → P. 57
Press to select the frequencies to be adjusted.

⓬ **EQ.LEVEL (▼, ▲) key** → P. 57
Press to adjust the equalizer curve level.

⓭ **S.W.EFFECT key** → P. 20
Press to switch the effect of the super woofer (optional) ON/OFF.

⓮ **AI key** → P. 56
Press to set the suitable equalizer curve for each CD automatically.

CD player unit



❶ RANDOM key → P. 29
Press to play tracks in a random order.

❷ REPEAT key → P. 28
Press for repeated playback.

❸ EDIT MODE key → P. 48
Press to select the edit recording mode.

❹ SPACE key → P. 27
Press in PGM mode to create a non-recorded space of a few seconds between recorded tracks automatically.

❺ TIME key → P. 26
Press to switch the time display mode.

❻ Search keys → P. 25
Press to move the played position of disc at high speed.

❼ Skip keys → P. 25
Press to skip to the beginning of another track.

❽ Stop key → P. 24

❾ Play/pause key → P. 24

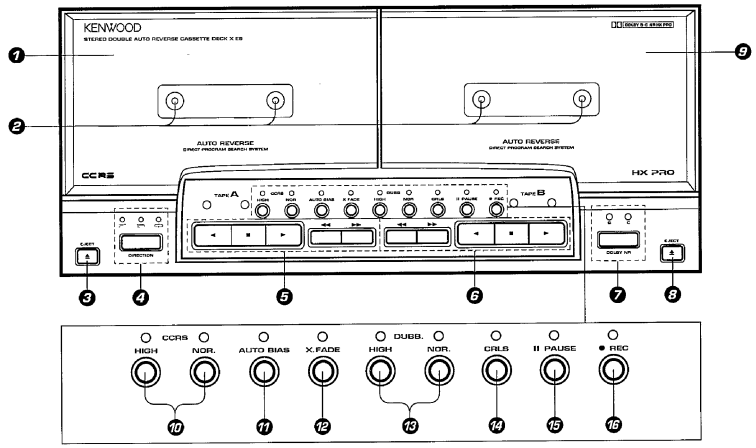
❿ DOOR key → P. 23

⓫ P. OPEN/CLOSE (Plus-1 tray open/close) key → P. 23

⓬ M.EJECT (Magazine eject) key → P. 23

⓭ Disc selector keys (1 to 6, P) → P. 24

Cassette deck unit

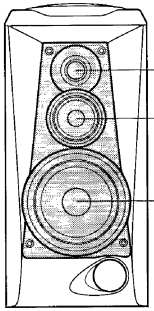


❶ **Deck A cassette holder**
❷ **Tape running indicators**
❸ **Deck A eject key**
❹ **DIRECTION key/indicator**
Press to switch over the play modes. → P. 30
❺ **Deck A operation keys**
◄, ► Play keys/indicators
■ Stop key
►► Fast Forward key
◄◄ Rewind key

❻ **Deck B operation keys**
◄, ► Play keys/indicators
■ Stop key
►► Fast Forward key
◄◄ Rewind key
❼ **DOLBY NR key/indicator** → P. 30
❽ **Deck B eject key**
❾ **Deck B cassette holder**
❿ **CCRS keys (HIGH, NOR.)/indicators**
Press to start recording after having set the optimum recording level for the CD and the optimum recording bias for the tape automatically. → P. 44

⓫ **AUTO BIAS key/indicator** → P. 41
Press to set the tape recording bias automatically.
⓬ **X.FADE (Cross-fade) key/indicator**
Press to create a tape with continuous music by fading in the beginning and fading out the end of every tune. → P. 47
⓭ **DUBB keys (HIGH, NOR.)/indicators**
Press for dubbing between tapes. → P. 43
⓮ **CRLS key/indicator** → P. 42
Press to set the optimum recording level automatically.
⓯ **Pause key/indicator** → P. 42
⓰ **Record key/indicator** → P. 41

Speaker unit



Model: LS-E9
Cabinet type: Bass-reflex type
(Figure shows the R CH speaker.)

Remote control unit

Input selector key
MAIN INPUT key: Press the select the component to be played.
SUB INPUT key: Selects the component to be played through the omni speakers (optional).

DUAL SOUND key

SOURCE DIRECT key

Cassette deck operation keys
To operate deck A, set the A/B switch to A. (The ● and ❚❚ keys are invalidated.)
To operate deck B, set the A/B switch to B.

Numeric/day-of-the-week keys
Function as the numeric keys of the CD player when the CD input is selected.
Function as the numeric keys of the tuner when the TUNER input is selected.
During timer programming, these keys function as the day-of-the-week keys.

VOLUME CONTROL keys
Press to adjust the volume.

MUTE key
Press to mute the sound temporarily.

Surround effect keys
OFF key, F.2CH key, F.4CH key, DEPTH key, DOLBY SURROUND key, DOLBY 3 STEREO key, MULTI LEVEL CONTROL keys, ASFC/ DEPTH LEVEL key, REAR key, CENTER key, DELAY TIME key, TEST TONE key

Super woofer/MD recorder operation keys
Set the A/B switch to A to operate the super woofer (optional).
Set the A/B switch to B to operate the MD (Mini Disc) recorder (optional).

S.W.VOL. key, S.W.EFFECT key, S.W.POWER key, ⏮ and ⏭ keys, ▶ key, ● key, ❚❚ key, ■ key

A/B switch
When operating keys in sections hashed ▨, set this switch according to the deck (A or B) you want to remote control.
- With keys which have two names, one printed in white and the other printed in brown, they function as indicated with the brown letters when the A/B switch is set to A and as indicated with the white letters when the switch is set to B.

POWER key

Tuner operation keys
BAND key, P.CALL keys

CD player operation keys
⏮ and ⏭ keys, ◀◀ and ▶▶ keys, ■ key, ▶/❚❚ key

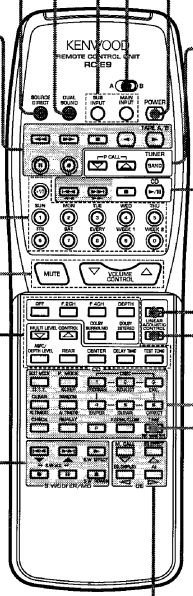
LINEAR ACOUSTIC CONTROL keys

CD/timer operation keys
Set the A/B switch to B to operate the CD player. Set the A/B switch to A to operate the timer.

EDIT MODE key, P.MODE key, Disc selector keys (1 to 6, P), CLEAR key, RANDOM key, CHECK key, REPEAT key, P.OPEN/CLOSE key, TIME key, O.T.T. key, SLEEP key, PROGRAM key, ADJUST key, EXE. key, AI TIMER1 key, AI TIMER2 key, ENTER key, CLEAR key, DIRECT key

HIT MASTER key

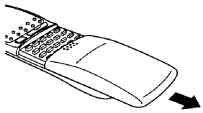
Graphic equalizer operation keys
▽ and △ keys, ◁ and ▷ keys, M.CALL key, EQ.EFFECT key, EQ.DISPLAY key, AI key



Model: RC-E9
Infrared ray system

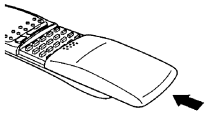
Loading batteries

1 ***Remove the cover.***



2 ***Insert batteries.***

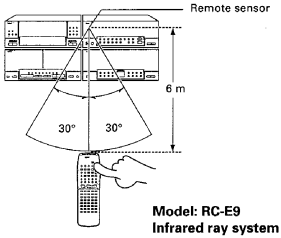
3 ***Close the cover.***



- Insert two R03 ("AAA"-size) batteries following the polarity indications.

Operation

After plugging the power cord of the amplifier, press the POWER key of the remote control unit to turn the power of the system ON. When the power is turned ON, press the key of the function to be operated.



Model: RC-E9
Infrared ray system

Operating range (approx.)

- When pressing more than one remote control keys successively, press the keys securely by leaving an interval of 1 second or more between keys.

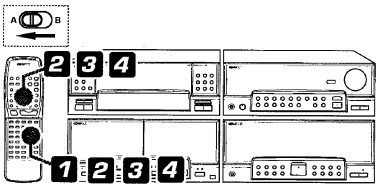
In this manual, the remote control unit is illustrated with its cover omitted. This is simply for the convenience of explanation.

Notes

1. The provided batteries are intended for use in operation checking, and their service life may be short.
2. When the remote controllable distance becomes short, replace both of the batteries with new ones.
3. If direct sunlight or the light of a high- frequency fluorescent lamp (inverter type, etc.) is incident to the remote sensor, malfunction may occur. In such a case, change the installation position to avoid malfunction.

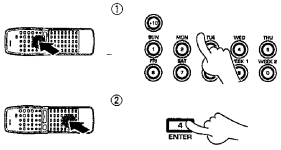
Clock adjustment

The preamplifier/tuner unit incorporates a clock function. Be sure to adjust the correct time before using the timer function.



1 *Press the ADJUST key.*

2 *Enter the year and press the ENTER key.*

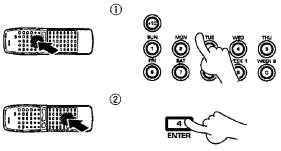


Press numeric keys in the following order.

To enter 1994 ... [1], [9], [9], [4]

- If you make a mistake, press the **CLEAR** key and enter the track No. from the beginning.

3 *Enter the month then the date, and press the ENTER key.*

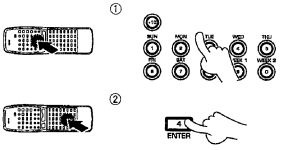


Press numeric keys in the following order.

To enter March 7 ... [0], [3], [0], [7]
To enter December 30 ... [1], [2], [3], [0]

- If you make a mistake, press the **CLEAR** key and enter the track No. from the beginning.

4 *Enter the hour and minute and press the ENTER key.*



Press numeric keys in the following order.

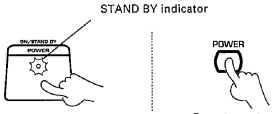
To enter 9:05AM ..... [0], [9], [0], [5]
To enter 4:50PM ..... [1], [6], [5], [0]
Use the 24-hour system.

- If you make a mistake, press the **CLEAR** key and enter the track No. from the beginning.
- To adjust correct time, press the **ENTER** key at the same moment as a time announcement.
- The time display blinks after a power failure or when the power cord has been unplugged from the AC outlet and plugged again. In such a case, adjust the clock again.

Sound adjustment functions

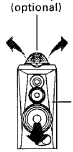
Power ON/OFF

Press the POWER key of the power amplifier/graphic equalizer unit.



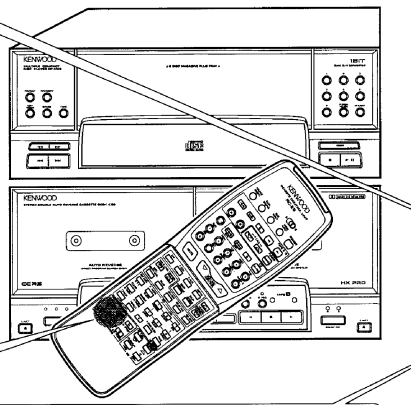
- The power of the overall system can be turned ON/OFF by pressing the **POWER** key of power amplifier/graphic equalizer unit.

Adjusting the volume balance between main and OMNI speakers (optional)



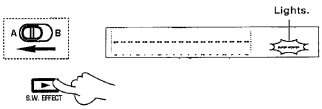
The balance between the main speaker volume and OMNI speaker volume can be varied freely. This allows you to enjoy various sounds according to the ambience of the music being played or to your personal taste .

- Press one of the **LINEAR ACOUSTIC CONTROL** keys to display the current balance setting. Pressing the keys while the setting is displayed will change the setting.
- Pressing and holding the **MAIN** or **SUB-OMNI** key alone allows to play the sound through the main or omni speakers alone.
- Set the Volume controls of the omni speakers to the center positions.



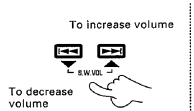
Enhanced bass entertainment with super woofer (optional)

① **Press the S.W.EFFECT key.**



Remote control unit
(Point remote control unit to the main system.)

② **Adjust the super woofer volume.**

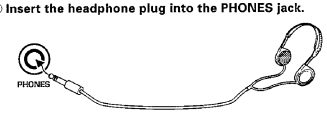


It can also be adjusted with the volume control provided on the super woofer.

- Once the super woofer volume has been set, it will increase or decrease according to the VOLUME adjustment.

Listening through headphones

① **Insert the headphone plug into the PHONES jack.**



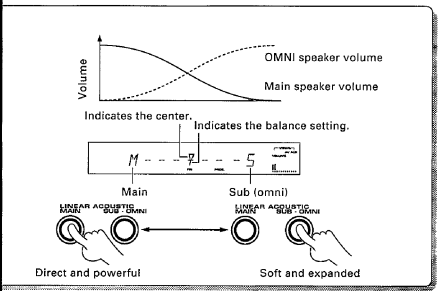
- The sounds from all speakers are cut off.
- The sound output through the OMNI speakers (optional) are not reproduced through the headphones.

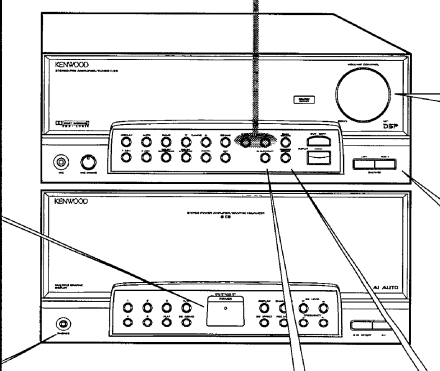
② **Adjust the volume.**

- Be sure to reduce the volume before removing the plug from the jack.

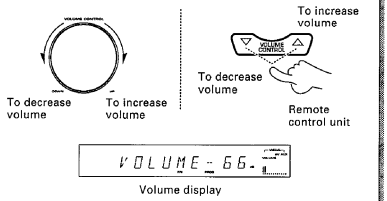
STAND BY mode of POWER switch

When the power cord is plugged into an AC outlet, the STAND BY indicator lights regardless of the power ON/OFF setting. This is because, even when the power is set to OFF, a small amount of power is supplied to the system to back up the memory. This status is called the standby mode of the system. While the STAND BY indicator is lit, the power can also be turned ON/OFF from the remote control unit.



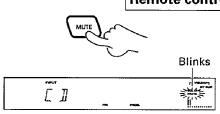


Volume adjustment



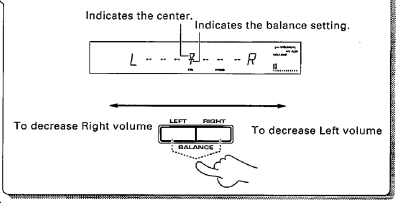
Muting the sound temporarily

Remote control unit only



- Press again to resume the original volume.

Adjusting the left/right volume balance

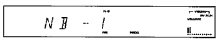


Compensation of bass sound

N.B.CIRCUIT: Natural Bass CIRCUIT

Every time the button is pressed, mode changes as follows.

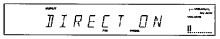
① NB +1 : (Weak effect)
② NB +2 : (Strong effect)
③ NB -1 : (Attenuated bass)
④ NB OFF : (N.B. circuit disabled)



- Normally, set to the NB OFF position.
- Adjust the control to obtain as natural bass sound as possible.

Playing sound with higher purity

When the SOURCE DIRECT function is switched ON, the played signal takes the simplest path without passing through the balance control circuitry and audio processing circuitry such as the DSP, so the sound can be played with an improved purity.



- When the SOURCE DIRECT is ON, the **SOURCE DIRECT** indicators on the front panel lights.
- Press the key again to cancel the SOURCE DIRECT.

Input selection on the preamplifier/tuner unit and easy operation function

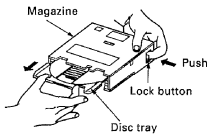
By simply changing the input source selection (CD, TUNER TAPE, etc.), the selected source component starts to play automatically. Inversely, playing a source component switches the input selection of the preamplifier/tuner unit automatically.
These operations are also possible from the remote control unit. When the power of the system is turned ON, the source which has been played the last time the power is turned OFF is played automatically (CD, TUNER, etc.).

* The easy operation function is deactivated during environmental sound play (with which different sounds are output through the main speakers and optional omni speakers).

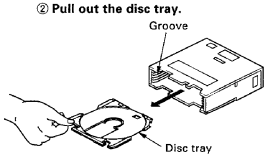
Inserting discs in magazine

1 Pull out the disc tray.

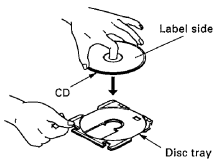
① **While pushing the lock button,**



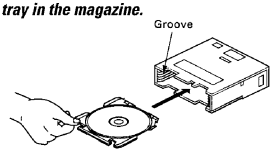
② **Pull out the disc tray.**



2 Place a disc.

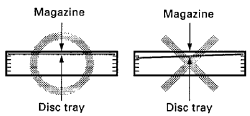


3 Insert the tray in the magazine.



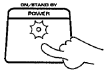
Slide the tray in horizontally along the groove on the left and right.

- Ordinary CD single (8 cm) disc adapter sold in audio stores cannot be used with this unit. In case a CD single (8 cm) disc is played, use the optional CD single disc magazine "CDM-608".

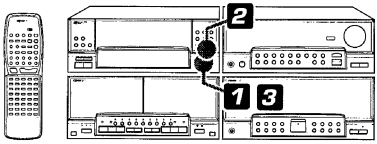


- When inserting discs in magazine, they must always be placed on the disc trays.
- Always insert 6 disc trays in a magazine regardless of whether discs are placed on them or not.
- Hold the magazine horizontally when transporting it.

Preparation



Turn the power of the power amplifier/graphic equalizer unit ON before the following procedure.



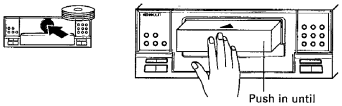
Loading (unloading) the magazine

1 Open the door.

- When the **M.EJECT** key is pressed, the door opens and the magazine is ejected.

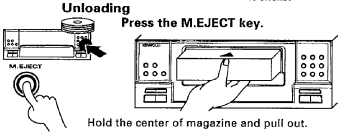
2 Load (or unload) the magazine.

Loading



Unloading

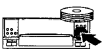
Press the M.EJECT key.



3 Close the door.

Inserting a disc on Plus-1 tray

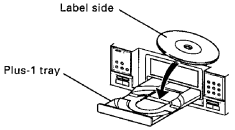
① Open the Plus-1 tray.



② Place a disc.

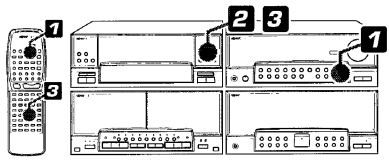
③ Close the Plus-1 tray.

- The door will open and the Plus-1 tray will come out.
- Place the disc properly along the groove on the tray. (Do not place obliquely, or malfunction may occur.)



- The Plus-1 tray and the door will close.

Use the following procedure to play CDs in the original order of tracks from track No. 1.



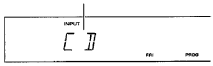
Playing tracks in order from track No. 1

1 Select the "CD" input.

Each press changes the inputs as follows.

① CD
② TUNER (frequency display)
③ TAPE
④ MD/DAT
⑤ VIDEO
⑥ AV AUX

"CD" should be displayed.



2 Load a disc.

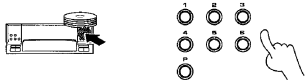
→ P. 22 → P. 23

- When playing only one disc, remove the magazine and place the disc only on the Plus-1 tray.

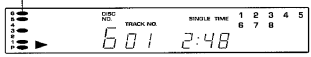
All of the disc indicators light regardless of whether there are discs on the disc trays or not.

3 Start playback.

Select the disc No.



The indicator goes off if the selected disc is not present.



- Playback starts from the selected disc and continues in order of disc Nos.
- If the ▶/II key is pressed without selecting a disc, discs will be played automatically in the following order: P → 1 → 2 → 3 → 4 → 5 → 6. (P: Plus-1 tray)

To stop playback

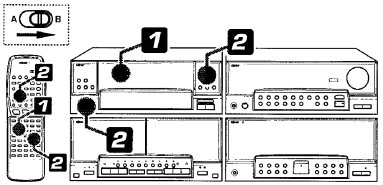
To pause playback

- Each press pauses and plays the CD alternately.

Preparation

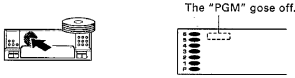
→ P.22 → P.23 → P.24

- Select the "CD" input with the **MAIN INPUT** key.
- Load discs in the CD player.



Playback from desired track

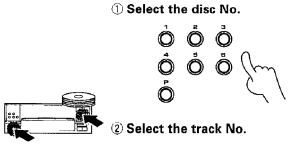
1 Check that the "PGM" indicator is not lit.



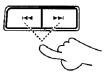
- If the "PGM" indicator is lit, press the **P.MODE** key of the remote control unit to turn it off.

2 Select the desired track.

① **Select the disc No.**



② **Select the track No.**



- By using the remote control unit, the desired track No. can be specified with numeric keys.

Press the numeric keys as shown below....
To enter track No. 23: [+10], [+10], [3]
To select track No. 40: [+10], [+10], [+10], [+10], [0]

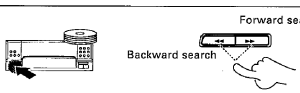
- Playback starts from the selected track and continues on the subsequent tracks.
- If a track number which does not exist on the disc is selected while the tray is open, the last track in the disc will be played.
- Once the tray has been closed or disc has started to play, it is not possible to select a disc which does not exist on the disc.

Skipping tracks

Set the A/B switch to B when operating this function with the remote control unit.

- When the I◄◄ key is pressed once during playback, the track being played will be played from the beginning.

Searching



Set the A/B switch to A when operating this function with the remote control unit.

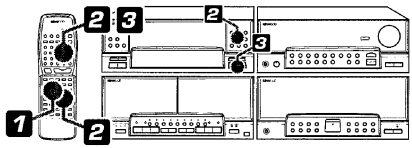
- Playback starts from the position where the key is released.

Use the following procedure to select desired tracks (up to 32 tracks) from up to 7 discs and program them in the desired order.

Preparation

→ P.22 → P.23 → P.24

- Select the "CD" input with the **MAIN INPUT** key.
- Load discs in the CD player.

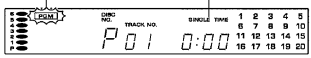


Programming tracks in desired order

1 *Activate the PGM mode.*

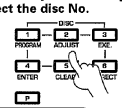
Lights.

Only "SINGLE TIME" is displayed in program mode.



2 *Enter track Nos. in the order you want to play them.*

① **Select the disc No.**

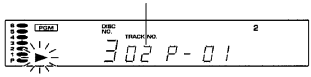


Within 8 seconds!

② **Select the track No.**

To select tracks from more than one CD, repeat steps ① and ② above.

Displays the entered track No.



- Up to 32 tracks can be programmed. *FULL* is displayed if you attempt to program a 33rd track.
- If you make a mistake, press the **CLEAR** key and enter the track No. from the beginning.
- If the track No. is not selected within 8 seconds after having selected the disc No. all of the tracks on the disc will be programmed.
- If a disc No. which is not present in the magazine is entered, it is programmed temporarily but canceled at the time of playback.

3 *Start playback*

- Tracks will be played in the order they were programmed (in order of P Nos.).
- When the I◀◀ or ▶▶I key is pressed during playback, the track will be skipped in the direction of the pressed button.

To stop playback

To return to playback in order of track Nos.

- Playback in the original order of tracks starts with the track being played.

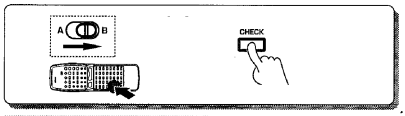
Auto space function

This function is convenient for recording CD on a cassette tape. When the **SPACE** key is pressed during programming of tracks, a non-recorded space of a few seconds will be created between tracks. By recording tracks with these spaces on tape, the search and repeat play operations of tape using the DPSS function (which works by searching the non-recorded spaces) can be performed reliably.

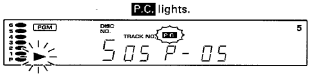
- Even when the performances of two tracks are continuous (which occurs with classical or live recording music), the spaces will be created if they have different track Nos.
- To cancel the creation of space, press the **SPACE** key again.

To check the programmed tracks

Remote control unit only



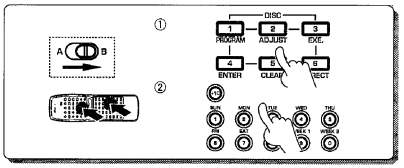
P.C. lights.



- Each time the key is pressed, the program No. (P-NO) and the disc No. are displayed.
- The previous display resumes in a few seconds.

To add a track to the program

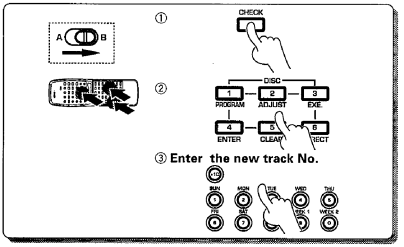
Remote control unit only



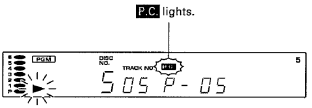
- When a track No. is entered, the track will be added to the end of the existing program.

To change a track in the program

Remote control unit only

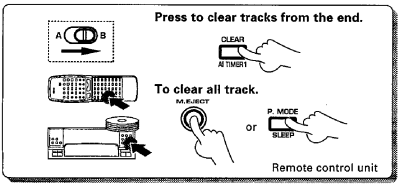


P.C. lights.



- Press the **CHECK** key repeatedly until the track No. to be changed is displayed.
- Press while the **P.C.** indicator is lit.
- The track being played cannot be changed.

To clear tracks from the program



Remote control unit only

- Each time the key is pressed, the last track in the program is cleared.
- The track being played cannot be cleared.

- The entire program is also cleared when the **P.OPEN/CLOSE** key is pressed.

Preparation

→ P.22 → P.23 → P.24

- Select the "CD" input with the **MAIN INPUT** key.
- Load discs in the CD player.

Time display on CD player

Each press of the **TIME** key changes the displayed contents.

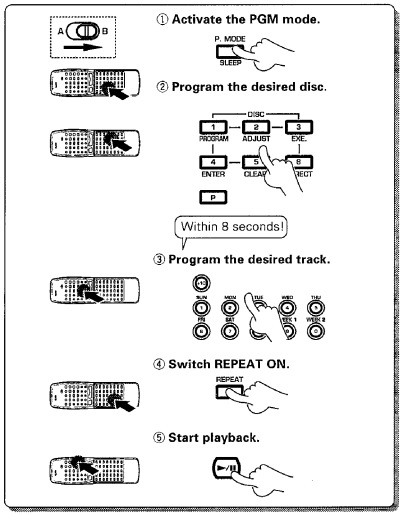
① SINGLE TIME 1:23 — Elapsed time of track being played
② - SINGLE TIME 2:37 — Remaining time of track being played
③ TOTAL TIME 23:45 — Elapsed time of entire disc
④ -TOTAL TIME 36:15 — Remaining time on entire disc

(- - : - - — The "SINGLE TIME" display remains in this condition during playback of track No. 21 or later.)

- Only the SINGLE TIME displays are shown in the PGM and RANDOM modes.

Repeated playback

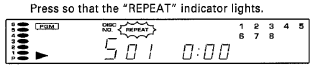
To repeat only the programmed tracks



Press so that the "PGM" indicator lights.

- If the track No. is not selected within 8 seconds after having selected the disc No. all of the tracks on the disc will be programmed.
- All of the programmed tracks will be repeated.
- In case only one track is programmed, only that track will be repeated.
- Up to 32 tracks can be programmed by repeating steps ② and ③.
- To play only the disc on the Plus-1 tray repeatedly, press the Plus-1 tray in step ② and wait for more than 8 seconds.

Press so that the "REPEAT" indicator lights.

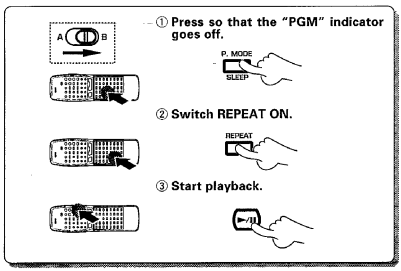


To stop repeated playback

Press the **REPEAT** key again.

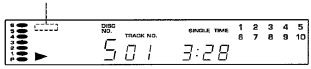
- The **REPEAT** indicator goes off and the playback following the current mode of the CD player starts.

To repeat all discs

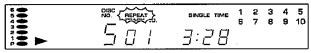


- All of the tracks on the all of the discs in the magazine and Plus-1 tray will be played repeatedly.

Press so that the "PGM" indicator goes off.



Press so that the "REPEAT" indicator lights.



To stop repeated playback:

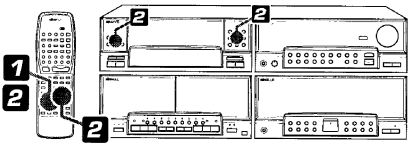
Press the **REPEAT** key again.

- The **REPEAT** indicator goes off and the playback following the current mode of the CD player starts.

Preparation

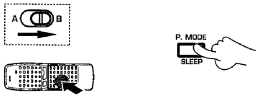
→ P.22 → P.23 → P.24

- Select the "CD" input with the **MAIN INPUT** key.
- Load discs in the CD player.

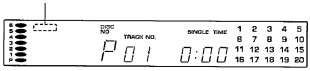


Playback in a random order (Random playback)

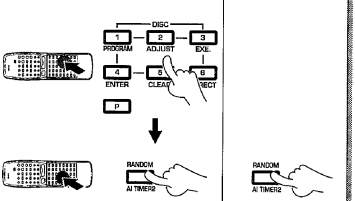
1 Press so that the PGM indicator goes off.



Press so that the "PGM" indicator goes off.



2 Select discs.



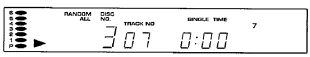
Select RANDOM ONE.

Select RANDOM ALL.

Each press of the **RANDOM** key changes the random playback modes.

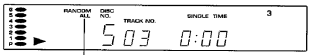
- ① **RANDOM ONE** : Random playback from a single disc.
- ② **RANDOM ALL** : Random playback from all discs.
- ③ OFF : Random playback is OFF.

Example when track No. 7 of disc No. 3 is selected first



- Random playback by selecting tracks at random after every track.

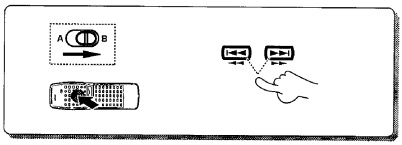
Example when track No. 3 of disc No. 5 is selected next



"RANDOM ONE" or "RANDOM ALL" indication

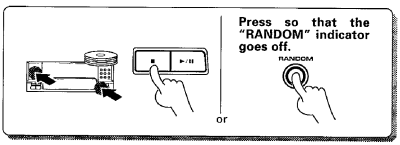
- It will never happen that the same track is repeated consecutively twice, but it may happen that a same track is played twice or more.

To select another track in the middle of playing one



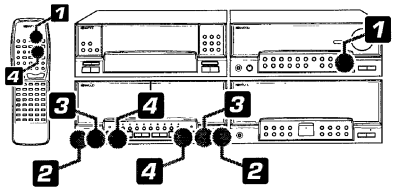
- Pressing the ⏮ key once returns to the beginning of the track being played.

To cancel random playback



- Press the ■ key to stop playback.
- Press the **RANDOM** key to start normal playback.

Playback of tape



Tape playback

1 Select the "TAPE" input.

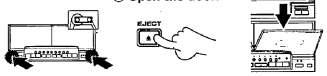
Each press changes the inputs as follows.

- ① CD
- ② TUNER (frequency display)
- ③ TAPE
- ④ MD/DAT
- ⑤ VIDEO
- ⑥ AV AUX

Press so that "TAPE" is displayed.

2 Load a cassette tape.

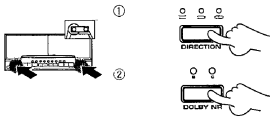
① Open the door.



② Insert a tape and close the door.

- The type of tape, that is, Normal, Chrome or Metal, is set automatically.
- Remove tape slack before loading.
- Close the door securely.

3 Determine the playback modes.



Each press switches the modes as follows.

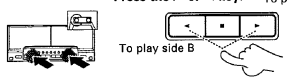
- ① "⇄" .... Endless playback occurs.
- ② "→" .... Playback stops after having played a side.
- ③ "⇒" .... Playback stops after having played the two sides. (If the ◄ key is pressed, only tape side B will be played and tape will stop after it.)

- ① DOLBY NR "B" ..... General NR.
- ② DOLBY NR "C" ..... NR with higher performance.
- ③ DOLBY NR "OFF" (no indication) ..... Dolby NR is not used.

- Select the Dolby NR mode according to the recording condition of the tape.

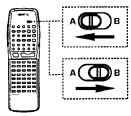
4 Start playback.

Press the ► or ◄ key.



(when side A is facing toward you)

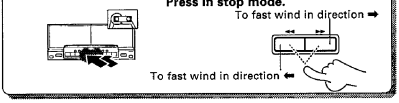
- When the remote control unit is used, set the A/B switch according to the deck to be operated.



To stop playback

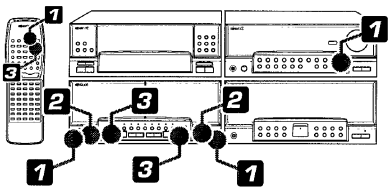
- Do not press the eject key until the tape has stopped completely.

To wind tape at high speed



- Press the ■ key to stop fast winding.

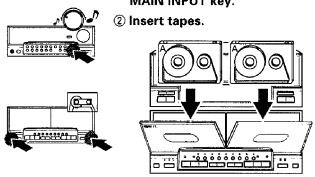
Use the following procedure to play tapes in decks A and B alternately.



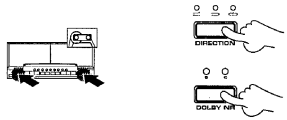
Relay playback

1 Load tapes.

① **Select the "TAPE" input with the MAIN INPUT key.**
② **Insert tapes.**



2 Select the playback modes.



- The tape sides indicated by the tape transport direction indicators will be played.

Each press switches the modes as follows.

① "⇨" .... Relay playback does not occur with this position.
② "⇉" .... Playback stops after having played one side on each of tapes in decks A and B.
③ "⮕" .... The two sides of tapes in decks A and B will be played repeatedly

① DOLBY NR "B" ..... General NR.
② DOLBY NR "C" ..... NR with higher performance.
③ DOLBY NR "OFF" (no indication) ..... Dolby NR is not used.

- Select the Dolby NR mode according to the recording condition of the tape.

3 Start playback.

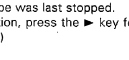
- Relay playback starts with the deck corresponding to the pressed key.

Dolby Noise Reduction (NR)

The Dolby NR system is used to minimize the hiss noise heard when playing tape. The system has the B type and C type, and the same type should be used in recording and playback to obtain the noise reduction effect.
When you record a tape, it is recommended to write the type used, "B" or "C", on the cassette label
Dolby B NR: Generally-used Dolby NR.
Dolby C NR: Features a higher noise reduction effect than the B type.
The use of Dolby C NR is recommended if you record tapes to be played on this unit.

Transport direction indicators

The ◄ and ► indicators indicate the current direction in which the tape advances when playback or recording is started automatically by the easy operation function, etc. This direction is the direction stored in memory when the tape was last stopped.
(To change the direction, press the ► key for the opposite direction then press the ■ key.)



Transport direction indicators

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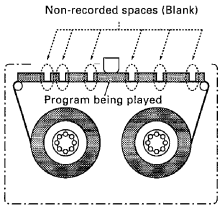
DPSS (Direct Program Search System)

The DPSS is capable of detecting non-recorded spaces of more than 4 seconds as "blanks between programs". It can be used in four ways as described below.

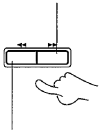


1. **Skip search** : **Plays the desired music program from the beginning by skipping programs until there. Up to 16 programs can be skipped.**
2. **Dash & play** : **Plays music programs repeatedly by skipping non-recorded spaces of more than 10 seconds.**
3. **Rewind playback** : **Rewinds tape to the beginning and restarts playback from there.**
4. **One-program repeat playback** : **Plays a single music program repeatedly up to 16 times.**

Skip search

During playback of side A (while ► is lit)

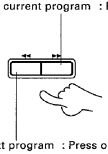
To play the next program : Press once.
To play the 4th program
after the current program : Press 4 times.



To return to the beginning
of the current program : Press once.
To play the 4th program
before the current program : Press 5 times.

During playback of side B (while ◄ is lit)

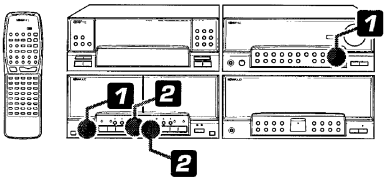
To return to the beginning
of the current program : Press once.
To play the 4th program
before the current program : Press 5 times.



To play the next program : Press once.
To play the 4th program
after the current program : Press 4 times.

Notes

1. The DPSS cannot be used on decks A and B simultaneously.
2. The DPSS may not function normally with the following kinds of tape.
   - Tapes containing several no-sound intervals of more than 4 seconds, such as conversation and talk tapes.
   - Tapes containing pianissimo sections, such as classical music tape.
   - Tapes in which large noise is recorded in blanks between programs.
   - Tapes containing blanks between programs that are shorter than 4 seconds.
   - Tapes recorded at low level.
   - Tapes recorded by cross-fade recording (in which the beginning of next program is overlapped on the end of previous program).



Dash & play

1 Select the playback modes.

① **Select the "TAPE" input with the MAIN INPUT key.**

②

2 Start dash & play.

Press simultaneously.

When a non-recorded space of more than 10 seconds is detected during playback, that space is automatically skipped by fast winding to play only the tape sections where sound is recorded.

Each press of the key switches the modes as follows.

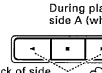
→ ① "⇄" ....The two tape sides are played 8 times, after which playback stops.
② "⇄" ....A tape side is played 8 times, after which playback stops.
③ "⇉" ....The two tape sides are played once, after which playback stops.

- If "⇉" is selected while tapes are present in both decks A and B, Dash & Play of the second deck starts after Dash & Play of the first selected deck has completed. This is repeated 16 times, after which the playback stops.

Main unit only

- When the ■ key is pressed, playback stops and the dash & play is canceled.

One-program repeat playback



During playback of side A (while ► is lit)

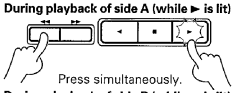
During playback of side B (while ◄ is lit)

Press during playback.
(when side A is facing toward you)

- The program being played will be repeated 16 times, after which normal playback resumes.
- When the ■ key is pressed, playback stops and the one-program repeat is canceled.

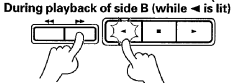
Rewind playback

During playback of side A (while ► is lit)



Press simultaneously.

During playback of side B (while ◄ is lit)



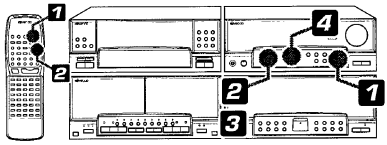
Press simultaneously.
(when side A is facing toward you)

Main unit only

- Tape is rewound until the beginning of the program being played, then its playback starts.

Broadcast Reception

Use the following procedure to receive radio stations.
It is also possible to receive them by one-touch operations by storing up to 20 stations in the preset memory.



Receiving broadcast stations

1 Select the "TUNER" input.

Each press changes the inputs as follows.

- ① CD
- ② TUNER (frequency display)
- ③ TAPE
- ④ MD/DAT
- ⑤ VIDEO
- ⑥ AV AUX

A radio frequency should be displayed.

2 Select the frequency band.

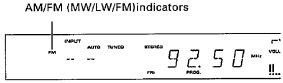
Each press alternates the band.

- ① **FM**
- ② **AM**

or

- ① **FM**
- ② **MW**
- ③ **LW**

AM/FM (MW/LW/FM)indicators



3 Select the tuning mode.

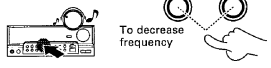
Each press alternates the mode.

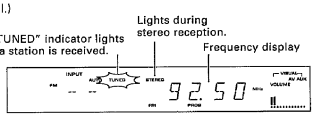
- ① **AUTO** lit (Auto tuning)
- ② **AUTO** not lit (Manual tuning)

- Normally, use the AUTO (Auto tuning) mode.

Use the manual tuning mode in case the reception is noisy due to weak waves. (In the manual mode, stereo broadcasts are received in monaural.)

4 Select a station.





Auto tuning : Each press receives the next station.
Manual tuning : Press the key repeatedly or hold it depressed until a station is received.

DISPLAY key

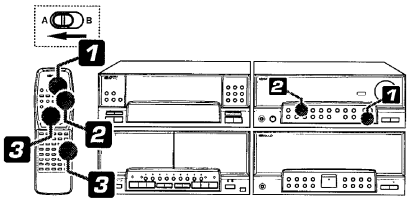
Every time the **DISPLAY** key is pressed, the display contents of the preamplifier/tuner unit changes.

Each press changes the display as follows.

- ① Input source display : The selected input source is displayed, When the TUNER input is selected, the frequency being received is displayed.
- ② Presence mode display
- ③ Clock display
- ④ Month/date display

When an operation related to turning is done, these change to the frequency display for a few seconds.

- While the power is OFF, pressing the **DISPLAY** key alternates between the month/date and clock displays.



Receiving radio station by specifying its frequency

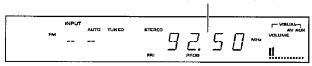
1 Select the "TUNER" input.

Remote control unit only

Each press changes the inputs as follows.

- ① CD
- ② TUNER (frequency display)
- ③ TAPE
- ④ MD/DAT
- ⑤ VIDEO
- ⑥ AV AUX

Press so that a frequency is displayed.



2 Select the frequency band.

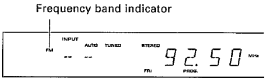
Each press alternates the band.

- ① **FM**
- ② **AM**

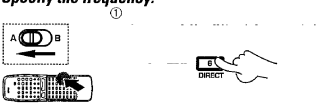
or

- ① **FM**
- ② **MW**
- ③ **LW**

Frequency band indicator



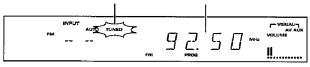
3 Specify the frequency.



Desired station	Order of pressing numeric keys	
FM 90 MHz	9, 0, 0	(100 kHz space)
	9, 0, 0, 0	(50 kHz space)
FM 102.5 MHz	1, 0, 2, 5	(100 kHz space)
	1, 0, 2, 5, 0	(50 kHz space)
AM (MW) 810 MHz	8, 1	(10 kHz space)
	8, 1, 0	(9 kHz space)
AM (MW) 1260 kHz	1, 2, 6	(10 kHz space)
	1, 2, 6, 0	(9 kHz space)

"TUNED" indicator lights when a station is received.

Frequency display



- If you enter a wrong frequency, the display will blink. In this case, you should enter the correct frequency.
- If you make a mistake, press the **CLEAR** key and restart the frequency entry from the beginning.

Storing radio stations in memory (Station preset)

Up to 20 broadcast stations can be stored as preset stations with a preset number assigned to each of them.
Once stations are preset, they can be received by simply specifying their numbers.

preparation.

- Receive a station to be stored in preset memory.

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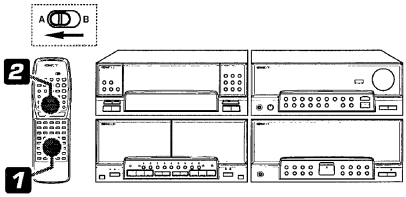
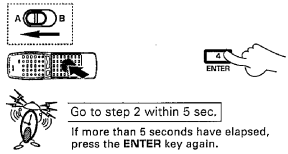


1 ***Press the ENTER key during reception.***

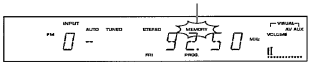


Go to step 2 within 5 sec.

If more than 5 seconds have elapsed, press the **ENTER** key again.

Remote control unit only

Lights (for 5 sec.)



- The station being received will be stored in preset memory.

2 ***Assign a preset number in the range from 1 to 20.***

Press the numeric keys as follows.
To store the station in preset "15" : +10, 5
To store the station in preset "20" : +10, +10, 0

- To preset other radio stations, repeat steps 1 and 2 for each of them.
- If the preset number assigned to a station has already been assigned to another, the new memory content replaces the old content.

Receiving a preset station

Press the preset number of the desired station.

① **Select the "TUNER" input with the MAIN INPUT key.**

Remote control unit only

Press the numeric keys as follows.
To received the station in preset "15": +10, 5
To receive the station in preset "20" : +10, +10, 0

Receiving preset stations in sequence (Preset call)

Press the P.CALL key.

① **Select the "TUNER" input with the MAIN INPUT key.**

Remote control unit only

- Every time the key is pressed, the preset stations are switched over as follows.

When △ is pressed 1 → 2 → 3 ····· 18 → 19 → 20

When ▽ is pressed 1 → 2 → 3 ····· 18 → 19 → 20

When a key is held depressed .....Preset stations will be skipped at an interval of about 0.5 second.

Operation with video components

For the connections and operations, also read carefully the instruction manuals supplied with the video components to be connected. → P.12

Playback of video tape

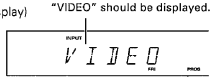
1 ***Switch the power of the monitor TV ON.***

2 ***Set the input selector to VIDEO mode.***

Each press changes the inputs as follows.

→① CD
② TUNER (frequency display)
③ TAPE
④ MD/DAT
⑤ VIDEO
⑥ AV AUX

"VIDEO" should be displayed.



3 ***Play the VCR.***

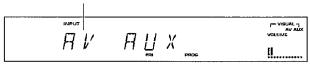
Recording of video source

1 ***Connect the video component to be recorded.***

2 ***Select the "AV AUX" input.***

- Connect the recording source component to the AV AUX jacks.
- The source components that can be used include a video deck (playback only), video camera (playback only), LD player or BS tuner.

"AV AUX" should be displayed.



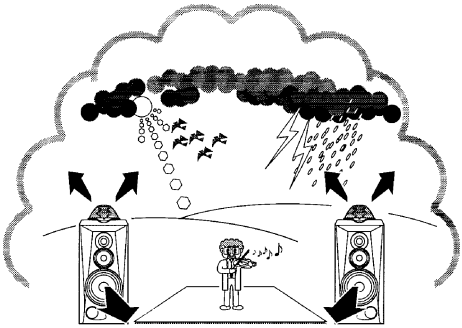
3 ***Play the video source component.***

4 ***Put the VCR in the record mode.***

3D-environmental sound system

This system allows you to reproduce two input sources, for example the CD and TAPE, separately from the main speakers and OMNI speakers. Overlapping the environmental sound from the OMNI speakers on the music from the main speakers will bring an atmosphere as if the listener is listening to the music in the middle of that environment.

To enjoy the environmental sound play, it is required to install the OMNI speakers (OMNI-A5: optional).

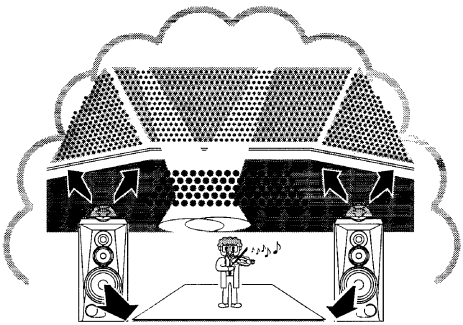


Enjoying music with sound of presence

The noise and atmosphere of a concert hall, jazz club or stadium will enhance the ambience of music.
Play the desired track from the provided CD through the OMNI speakers and play music through the main speakers.

When the presence sound is combined with one of the DSP presence modes, the atmosphere can be made more realistic.

→ P. 59



3D stands for "three-dimensional".

Note on provided CD

When it is required to play a music CD while reproducing one of the environmental sounds on the CD provided, record the desired environmental sound track of the CD ON to a tape, play this tape through the OMNI speakers and play the desired music of the music CD through the main-speakers. By using the repeat playback function of the CD player unit when recording onto tape, the same track can be recorded repeatedly on it.

The provided CD has been produced to reproduce the height and directional properties as well as the left/right positions and feeling of depth of the sound sources. We strongly recommend that you also experience the world of 3D environmental sound!

Repeat playback → P. 28 Recording → P. 40

3D-Environmental sound play

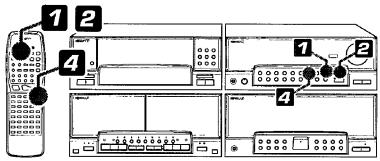
ENVIRON-MENTAL SOUND

preparations.

- Switch the presence effect OFF.

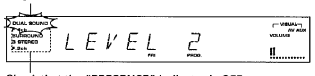
→P. 22 →P. 30 →P. 34

- Receive a radio station or play a CD or cassette tape.



1 *Switch the DUAL SOUND ON.*

Lights.



Check that the "PRESENCE" indicator is OFF.

Each press of the **DUAL SOUND** key changes the environmental sound volume as follows.

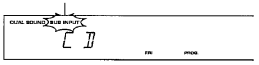
- ① LEVEL 1 (Environmental sound volume: Low)
- ② LEVEL 2 (Environmental sound volume: Medium)
- ③ LEVEL 3 (Environmental sound volume: High)
- ④ DUAL OFF (Environmental sound is not output)

2 *Select the source component of the environmental sound.*

Each press switches the input as follows.

- ① CD
- ② TAPE
- ③ MD/DAT
- ④ AV AUX

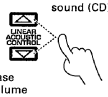
Lights.



- The SUB(OMNI) INPUT cannot be selected while the "**DUAL SOUND**" indicator is OFF.

3 *Play an environmental sound.*

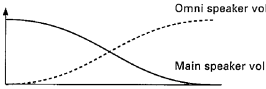
4 *Adjust the volume balance.*



To increase environmental sound (CD) volume

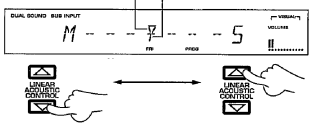
To increase music volume

- Adjust the desired volume balance between the MAIN and OMNI inputs with the **LINEAR ACOUSTIC CONTROL** key.



Indicates the center.

Indicate the balance condition.



To return to normal playback:

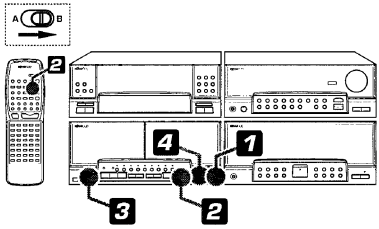
The "DUAL SOUND" display goes off.

Recording (Deck B only)

40

This unit incorporates the CRLS (Computer Recording Level System) automatic recording level setting and Dolby HX Pro headroom extension to allow excellent sound recording with simple operation.

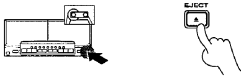
The equalizer and presence effects applied to the music are recorded together with the music sound. → P. 53 → P. 59
When the Environmental Sound function is applied, the environmental sound can be recorded mixed with the music sound. Enjoy the Environmental Sound recording by combining the CD and tuner sounds or an external component connected to the system. (In this case, it is not possible to record the sound of deck A onto deck B.)



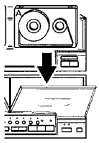
Preparation for recording

1 Load a tape in deck B.

① **Open the door of deck B.**



② **Insert a tape.**

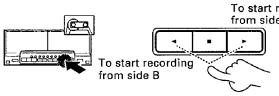


③ **Close the door.**

- The type of tape, that is, Normal, Chrome or Metal, is set automatically.
- Remove tape slack before loading.
- When the microphone is not used, set the **MIC MIXING** control fully counterclockwise to the minimum position.

2 Select the tape transport direction.

① **Press the ► or ◄ key.**



(when side A is facing toward you)

② **Press the ■ key.**

- When recording is started, the tape is transported in the direction selected in this step.
- Wind the tape to the position where recording is to be started.

3 Select the recording mode.

Each press of the key switches the modes as follows.

► ① "⇄" .... (In this case, too, the two tape sides are recorded, after which recording stops.)
② "⇉" .... A tape side is recorded, after which recording stops.
③ "⇒" .... The two tape sides are recorded, after which recording stops.

4 Select the Dolby NR mode.

Each press of the key switches the modes as follows.

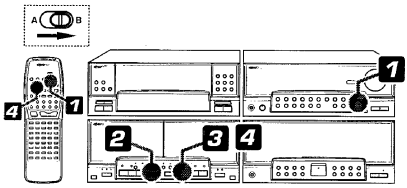
► ① DOLBY NR "B" ..... B type (general type).
② DOLBY NR "C" ..... C type (with higher performance).
③ DOLBY NR "OFF" (no indication) ..... Dolby NR is not used.

Recording (Deck B only)

Preparations

- Load a cassette tape in the deck.
- Select the tape transport direction (◄ or ►).
- Select "⇉" (two-side recording) or "⇄" (one- side recording).
- Select the Dolby NR mode.
- (Insert a disc in the CD player.)

→ P. 40



If the DUAL SOUND key is ON and the "TAPE" is selected as the SUB (OMNI) INPUT, recording is not possible.

The equalizer and presence effects applied to the music are recorded together with the music sound. → P. 53 → P. 59

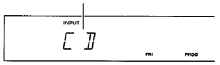
1 Select the source to be recorded.

Select other input source than "TAPE".

Each press changes the inputs as follows.

① CD
② TUNER (frequency display)
③ TAPE
④ MD/DAT
⑤ VIDEO
⑥ AV AUX

The source component to be recorded should be displayed.



- When the CD is input is selected and if a disc has been set in the CD player, its playback starts immediately.

2 Start auto-bias adjustment.

- The bias adjustment consists of checking the characteristics of the loaded tape and adjusting the deck to allow best-balanced recording. The adjustment data are held in memory unless the power is turned OFF or the door of deck B is opened, so it is not required to re-adjust the bias in case of re- recording.
- The bias adjustment completes in approx. 45 seconds, after which the deck enters the stop mode.
- To abort bias adjustment in the middle, press the ■ key.
- Even if the bias adjustment is not performed, there will be no trouble in recording because a general bias has been set depending on the Normal, Chrome or Metal type of tape.

3 Start auto recording level adjustment.

① **Play the contents to be recorded (or receive the radio station to be recorded).**

②

- The recording level setting completes in approx. 20 seconds, after which the deck enters the record-pause mode.
- If recording is started during the setting (while the CRLS indicator is blinking), distorted sound may be recorded.
- If the **CRLS** key is pressed during the setting (while the indicator is blinking), the setting is interrupted and the deck enters the record-pause mode.
- If a non-recorded space of more than 5 seconds is detected after the **CRLS** key is pressed, the recording level setting is aborted.

4 Start recording.

① **Play the contents to be recorded (or receive the station to be recorded).**

②

When recording a CD, if the track(s) to be recorded is selected by pressing a disc selector key or numeric keys without pressing the ■ key, the recording of the cassette deck starts automaticallay. (Synchro recording)

- Recording starts.
- Recording stops automatically when the tape side(s) to be recorded have been recorded.
- If the LINEAR ACOUSTIC CONTROL setting is changed during recording with the DUAL SOUND ON, the recorded volume (or the balance between the main and SUB-OMNI inputs) varies.

Function of CRLS key

The CRLS sets the recording level automatically in 20 seconds by analyzing the sound to be recorded.

If the key has never been pressed

..... The sound is recorded with the basic level set with the unit.

If the key is pressed

..... The recording level is set automatically and stored in memory as the recording level to be used with the current input being selected (CD, TUNER, AUX, etc.). From the next time on, this recording level is set automatically for that input even if the key is not pressed.

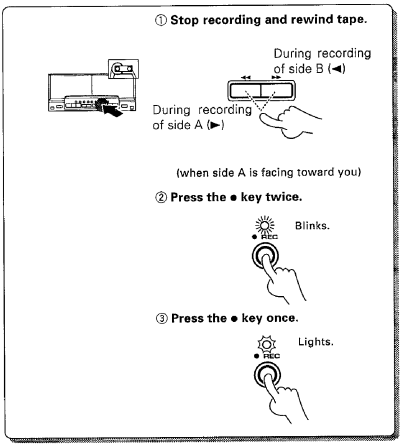
To return to the level used in previous recording

..... Press the ■ key while the CRLS indicator is blinking.

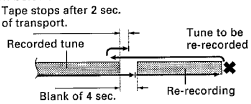
To return to the basic level

..... Hold the key depressed until the indicator goes off (for approx. 3 seconds).

Re-recording

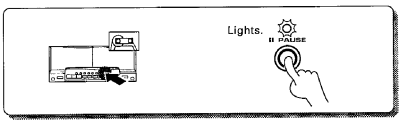

① Stop recording and rewind tape.
During recording of side B (◄)
During recording of side A (►)
(when side A is facing toward you)
② Press the ● key twice.
Blinks.
● REC
③ Press the ● key once.
Lights.
● REC

- If there is a non-recorded space of more than 4 seconds before the recording start position, recording is aborted and tape is rewound as shown below.



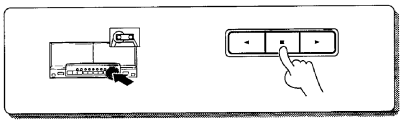
- If there is no recorded tune before, the tape will be rewound then stopped.
- Tape stops after leaving a non-recorded space of approx. 4 seconds.
- When re-recording from the beginning of tape, feed the leader tape (the first portion of tape that cannot be recorded) before starting re-recording.
- Recording will start.

To pause recording temporarily



- Press the ● key to restart recording.

To end recording in the middle



Dolby HX Pro

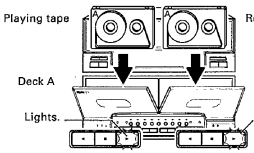
The Dolby HX Pro headroom extension system records high frequencies such as the cymbal sound clearly by controlling the bias current during recording according to the frequency composition of the sound being recorded. This system is activated automatically during recording with this unit.

Copying tape (Tape dubbing)

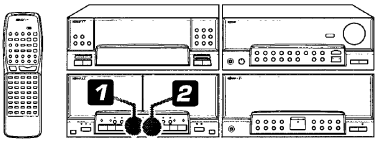
Preparations

- Load a cassette tape in the deck.
- Select the tape transport direction (◄ or ►).
- Select "⇉" (two-side recording) or "⇄" (one- side recording).

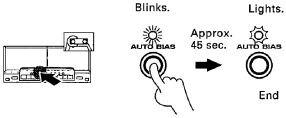
→ P. 40



The contents of the tape in deck A can be copied onto the tape in deck B.

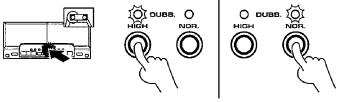


1 Start auto-bias adjustment.



- The bias adjustment consists of checking the characteristics of the loaded tape and adjusting the deck to allow best-balanced recording. The adjustment data are held in memory unless the power is turned OFF or the door of deck B is opened.
- The bias adjustment completes in approx. 45 seconds, after which the deck enters the stop mode.
- To abort bias adjustment in the middle, press the ■ key.
- Even if the bias adjustment is not performed, there will be no trouble in recording because a general bias has been set depending on the Normal, Chrome or Metal type of tape.

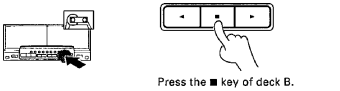
2 Start dubbing.



The deck A operation keys are inactive during dubbing. During high-speed dubbing, the cassette decks cannot be operated from the remote control unit.

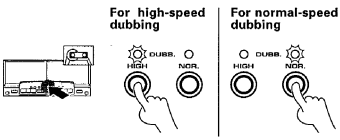
- Dubbing starts.
- Dubbing ends automatically when the side(s) to be dubbed has been completed.

To stop dubbing



- Both decks A and B stops.

To pause dubbing



- Only deck B enters the record-pause mode after leaving a non-recorded space of approx. 4 seconds in case of normal-speed dubbing or approx. 6 seconds in case of high-speed dubbing.
- To restart dubbing, press the **DUBB NORM** or **DUBB HIGH** key which was pressed to pause dubbing.

Notes

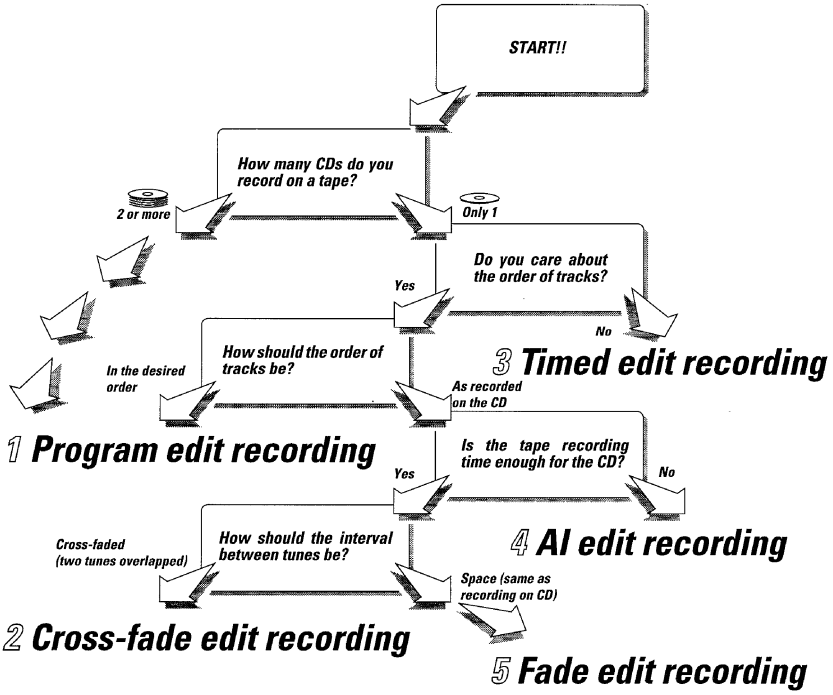
1. The recording level adjustment is not necessary in dubbing.
2. The **DOLBY NR** key is not active in dubbing mode. The tape recorded on deck B is given the same Dolby NR condition as the tape played on deck A.
3. To prevent interference of noise, the unit should be separated at a distance from a TV during high-speed dubbing.
4. To avoid sound quality degradation, use the normal-speed dubbing when dubbing from a tape recorded with a high recording level.

CD edit recording

The following procedures allow edit recording of CDs by simply setting the length (recording time) of the tape. All of other operations will be assumed by the UD system, from the recording level and bias settings to the complicated processing at the end of two sides of tape. (CCRS)

Desired CD tracks of more than one CD can be edited in the desired order. In this case, use the "program edit recording" procedure.

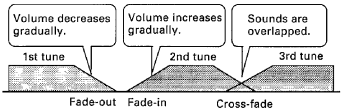
Select the type of edit recording.


START!!
How many CDs do you record on a tape?
2 or more
Only 1
Do you care about the order of tracks?
Yes
No
How should the order of tracks be?
In the desired order
As recorded on the CD
3 Timed edit recording
1 Program edit recording
Is the tape recording time enough for the CD?
Yes
No
How should the interval between tunes be?
Cross-faded (two tunes overlapped)
Space (same as recording on CD)
4 AI edit recording
2 Cross-fade edit recording
5 Fade edit recording

CCRS (Computer Controlled Recording System)

The CCRS allows to record CD on tape with a one-touch operation.
When the **CCRS** key is pressed, the contents of CD and the characteristics of the tape used are checked in approx. 90 seconds, the recording level and bias are automatically set accordingly and recording starts. After the recording, it is also stopped automatically. Pressing the **CCRS** key ON switches the DUAL SOUND function automatically OFF.
The auto bias setting is cleared when the power is turned OFF or the door of deck B is opened. (The "AUTO BIAS" indicator is lit while the auto bias data is held in memory.)
The edited data is cleared when the power is turned OFF or when the CD is stopped.

Fade-in/fade-out



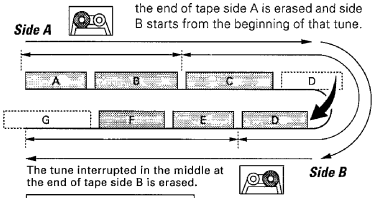
Fade-out : Ending a tune by gradually decreasing the volume.
Fade-in : Starting a tune by gradually increasing the volume.
Cross-fade : Combination of fade-out and fade-in so that the sounds of two tunes are overlapped.

1 Program edit recording

→ P. 46

From one CD

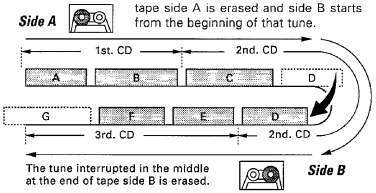
CD tracks are recorded in the order they are programmed. The tune interrupted at the end of tape side A is erased and side B starts from the beginning of that tune.



The tune interrupted in the middle at the end of tape side B is erased.

From more than one CD

CD tracks of several CDs are recorded in the order they are programmed. The tune interrupted in the middle at the end of tape side A is erased and side B starts from the beginning of that tune.

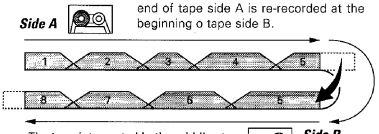


The tune interrupted in the middle at the end of tape side B is erased.

2 Cross-fade edit recording

→ P. 47

Tunes are connected by fade-out and fade-in, and the tune interrupted at the end of tape side A is re-recorded at the beginning o tape side B.



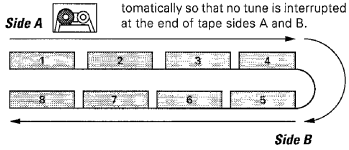
The tune interrupted in the middle at the end of tape side B is left as it is.

The CD tracks can be recorded in the same order as they are recorded on the CD or as they are programmed.

3 Timed edit recording

→ P. 48

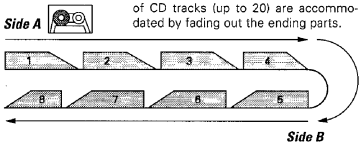
The order of CD tracks are changed automatically so that no tune is interrupted at the end of tape sides A and B.



4 AI edit recording

→ P. 49

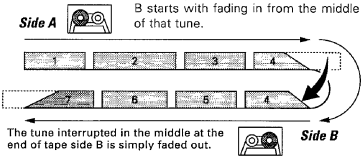
In case the recording time of tape is shorter than the playing time of CD, all of CD tracks (up to 20) are accommodated by fading out the ending parts.



5 Fade edit recording

→ P. 50

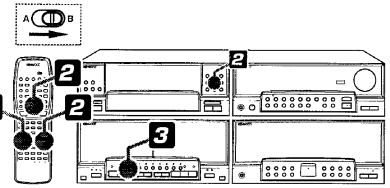
CD tracks are recorded in the order they are recorded. The tune interrupted at the end of tape side A is faded out and side B starts with fading in from the middle of that tune.



The tune interrupted in the middle at the end of tape side B is simply faded out.

Program edit recording

Use the following procedure to record CD tracks in the order programmed by yourself so that no tune is interrupted in the middle at the ends of tape sides.



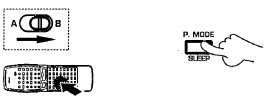
Preparations

→ P. 40

- Load a cassette tape in deck B.
- Select the tape transport direction (◄ or ►).
- Select "⇄" (two-side recording).
- Select the Dolby NR mode.
- Select the "CD" input with the **MAIN INPUT** key.
- Insert disc(s) in the CD player.

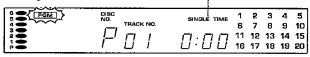
The equalizer and presence effects applied to the music are recorded together with the music sound. → P. 53 → P. 59
(In case of high-speed CCRS recording, the equalizer effect should be switched off.)

1 Activate the PGM mode.



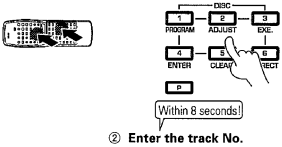
Only "SINGLE TIME" display is shown in PGM mode.

Lights.



2 Enter disc Nos. and track Nos. in the order you want to record them. (Editing)

① **Enter the disc No.**



② **Enter the track No.**

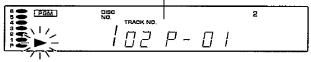
To edit tracks from more than one CD, repeat ① and ② for each CD.

To check the edited contents

To clear the edited contents

→ P. 51

Displays the entered track No.

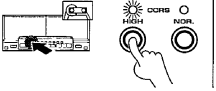


Press the numeric keys as shown below....
To enter track Nos. 2, 5 and 25:
2, 5, +10, +10, 5

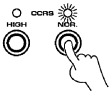
- Select CD tracks so that their total playing time does not exceed the recording time of the tape.
- Up to 32 tracks can be programmed. *FULL* is displayed if you attempt to program a 33rd track.
- If you make a mistake, press the **CLEAR** key and enter the track No. from the beginning.
- The CCRS setting will not occur if the track No. is not selected within 8 seconds after having selected the disc No.
- The **SPACE** key and **REPEAT** key are invalid.

3 Start edit recording.

For high-speed recording



For normal-speed recording



- The recording level and bias will be adjusted automatically in approx. 90 seconds, after which recording starts.
- In editing from more than one CD, the CCRS setting operation is performed after every disc change. In this case, the deck stops automatically and restart recording after having completed the CCRS operation.
- The Dolby NR is switched OFF during high-speed CCRS recording. Therefore, the Dolby NR should be switched off when playing the tape recorded by high-speed CCRS recording.
- The frequencies of musical notes are doubled during high-speed CCRS recording. Therefore, the recorded contents cannot be enjoyed as music even when the sound is monitored through the speakers.

Notes

1. When the **CCRS** key is pressed during playback of CD, the playback stops and the CCRS setting (preparation for edited recording) starts.
2. The automatic recording level setting operation in the edit recording utilizes a section suitable for this purpose in the CD present in the CD player.
3. Edit recording is not possible with CDs containing a track that is longer than one tape side, which may occur with classical music, etc.
4. If the deck is set for one-side recording (⇄), the processing at the tape end is applied only on side A.

Cross-fade edit recording

The cross-fade editing may be easier to understand by saying that it is a function for cross-fading tunes than saying that it edits the order of tunes. This function can be used in combination with the program edit recording and timed edit recording as well as in simple recording of CD tracks in the order they are recorded on the CD.

Preparations

→ P. 40

- Load a cassette tape in deck B.
- Select the tape transport direction (◄ or ►).
- Select "⇄" (two-side recording).
- Sele ct the Dolby NR mode.
- Select the "CD" input with the **MAIN INPUT** key.
- Insert disc(s) in the CD player.

The equalizer and presence effects applied to the music are recorded together with the music sound. → P. 53 → P. 59

In case the order of tracks on CD is to be edited

① **Perform the editing steps of program or timed edit recording.**

② **Start edit recording.**

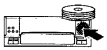
- After the editing operation, do not press the **CCRS** key, but return to this page and go to step ②. If the **CCRS** key is pressed after editing, the corresponding edit recording will start in place of cross-fade recording.

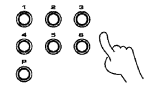
Program editing → P. 46
Timed editing → P. 48

- High-speed recording is not possible.
- The recording level and bias will be adjusted automatically in approx. 90 seconds, after which recording starts.

In case the CD tracks are to be recorded in the order they are recorded on CDs

① **Select the disc to be recorded.**





② **Start edit recording.**

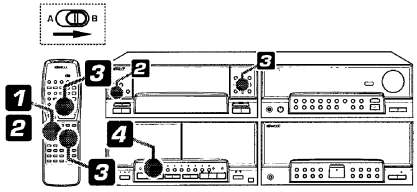
- High-speed recording is not possible.
- The recording level and bias will be adjusted automatically in approx. 90 seconds, after which recording starts.

Note

If a CD track which has already been faded in or out is recorded by cross-fade recording, the space between the adjacent tune may become very long.

Timed edit recording

By specifying the recording time of the tape used, CD tracks can be recorded with their order automatically changed so that no tune is interrupted at the end of tape sides A and B.



Preparations

→ P.40

- Load a cassette tape in deck B.
- Select the tape transport direction (◄ or ►).
- Select "⊃" (two-side recording).
- Select the Dolby NR mode.
- Select the "CD" input with the **MAIN INPUT** key.
- Insert disc(s) in the CD player.

The equalizer and presence effects applied to the music are recorded together with the music sound. → P.53 → P.59
(In case of high-speed CCRS recording, the equalizer effect should be switched off.)

1 Make sure that the "PGM "indicator is off.

Should be OFF.

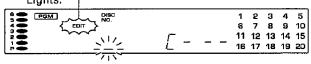
2 Select the "EDIT" mode.

Each press switches the edit modes as follows.

→ ① **EDIT**
└ ② **AI EDIT**

Press so that the "EDIT" indicator lights.

Lights.

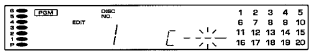


Go to step 3 within 8 seconds.
If more than 8 seconds have elapsed, select the mode again.

- To use the auto space function, press the **SPACE** key.To cancel the auto space function, press the **P.MODE** key and restart from step 2.

3 Enter the disc and tape conditions.

① **Enter the disc No.**



Press the numeric keys as shown below....
30-minute tape: [+10], [+10], [+10], [0]
46-minute tape: [+10], [+10], [+10], [+10], [6]

② **Enter the recording length of the tape.**

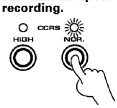
46-, 54-, 60- or 90-minute tapes can be selected simply by pressing the **TIME** key for the required number of times.
After entry, press the **EDIT MODE** key then proceed to step 4.

- Up to 20 tracks can be edited.
- CD tracks will be edited automatically onto tape sides A and B. After editing, the **EDIT** indicator stops blinking and starts to light steadily.

4 Start edit recording.

For high-speed recording

For normal-speed recording.



- The recording level and bias will be adjusted automatically in approx. 90 seconds, after which recording starts.
- The tape and CD stop automatically when recording has completed.
- The Dolby NR is switched OFF during high-speed CCRS recording. Therefore, the Dolby NR should be switched off when playing the tape recorded by high-speed CCRS recording.
- The frequencies of musical notes are doubled during high-speed CCRS recording. Therefore, the recorded contents cannot be enjoyed as music even when the sound is monitored through the speakers.

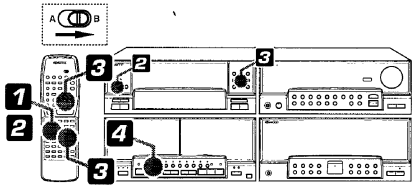
AI edit recording

In case the recording time of tape is shorter than the playing time of the CD to be recorded, all of CD tracks (up to 20) can be accommodated by fading out the ending parts.

Preparations

→ P. 40

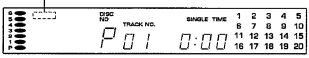
- Load a cassette tape in deck B.
- Select the tape transport direction (◄ or ►).
- Select "⊃" (two-side recording).
- Select the Dolby NR mode.
- Select the CD input with the **MAIN INPUT** key.
- Insert disc(s) in the CD player.



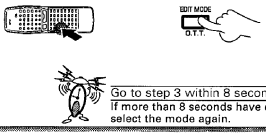
The equalizer and presence effects applied to the music are recorded together with the music sound. → P. 53 → P. 99
(In case of high-speed CCRS recording, the equalizer effect should be switched off.)

1 *Make sure that the "PGM" indicator is off.*

Should be OFF.



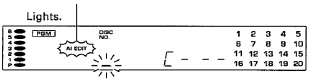
2 *Select the "AI EDIT" mode.*



Each press switches the edit modes as follows.

→ ① **EDIT**
└ ② **AI EDIT**

Press so that the "AI EDIT" indicator lights.

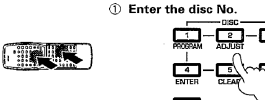


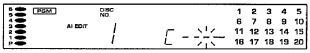
Go to step 3 within 8 seconds.
If more than 8 seconds have elapsed, select the mode again.

- The **SPACE** key and **REPEAT** key are invalid.

3 *Enter the disc and tape conditions.*

① **Enter the disc No.**





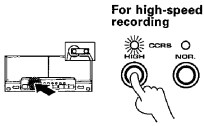
Press the numeric keys as shown below....
30-minute tape: +10, +10, +10, 0
46-minute tape: +10, +10, +10, +10, 6

② **Enter the recording length of the tape.**

46-, 54-, 60- or 90-minute tapes can be selected simply by pressing the **TIME** key for the required number of times.
After entry, press the **EDIT MODE** key then proceed to step 4.

4 *Start edit recording.*

For high-speed recording

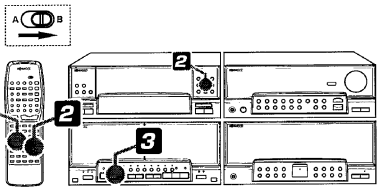


For normal-speed recording.

- CD tracks will be edited automatically onto tape sides A and B. After editing, the **AI EDIT** indicator stops blinking and starts to light steadily.
- The recording level and bias will be adjusted automatically in approx. 90 seconds, after which recording starts.
- If the specified tape recording length is long enough, all CD tracks will be recorded without being faded out.
- The tape and CD stop automatically when recording has completed.
- The Dolby NR is switched OFF during high-speed CCRS recording. Therefore, the Dolby NR should be switched off when playing the tape recorded by high-speed CCRS recording.
- The frequencies of musical notes are doubled during high-speed CCRS recording. Therefore, the recorded contents cannot be enjoyed as music even when the sound is monitored through the speakers.
- The AI edit recording cannot be combined with cross- fade edit recording.

Fade edit recording

The tune interrupted at the end of tape side A is faded out and side B starts with fading in from the middle of that tune. The tune interrupted at the end of tape side B is simply faded out.



Preparations

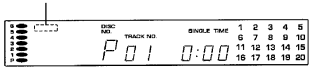
→ P. 40

- Load a cassette tape in deck B.
- Select the tape transport direction (◄ or ►).
- Select "⊃" (two-side recording).
- Select the Dolby NR mode.
- Select the "CD" input with the **MAIN INPUT** key.
- Insert disc(s) in the CD player.

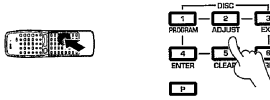
The equalizer and presence effects applied to the music are recorded together with the music sound. → P. 53 → P. 59
(In case of high-speed CCRS recording, the equalizer effect should be switched off.)

1 Make sure that the "PGM "indicator is off.

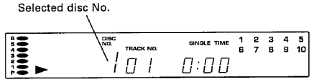
Should be OFF.



2 Select the disc.



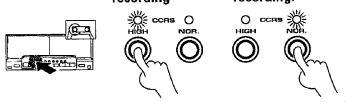
Selected disc No.



3 Start edit recording.

For high-speed recording

For normal-speed recording.

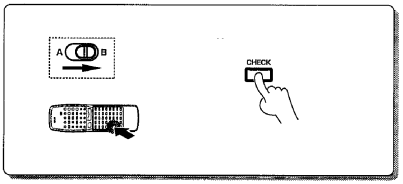


- The recording level and bias will be adjusted automatically in approx. 90 seconds, after which recording starts.
- The CD tracks are recorded in the order they are recorded on the CD.
- The Dolby NR is switched OFF during high-speed CCRS recording. Therefore, the Dolby NR should be switched off when playing the tape recorded by high-speed CCRS recording.
- The frequencies of musical notes are doubled during high-speed CCRS recording. Therefore, the recorded contents cannot be enjoyed as music even when the sound is monitored through the speakers.

Notes

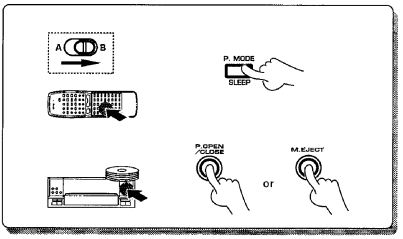
1. When the **CCRS** key is pressed during playback of CD, the playback stops and the CCRS setting (preparing edited recording) starts.
2. The automatic recording level setting operation in the edit recording utilizes a section suitable for this purpose in the CD present in the CD player.
3. Edit recording is not possible with CDs containing a track that is longer than one tape side, which may occur with classical music, etc.
4. If the deck is set for one-side recording (⇀), the processing at the tape end is applied only on side A.
5. When the last tune of tape side B is faded out, the ending part of the last but one tune may sometimes be faded out if the space between it and the last tune is short.

To check the edited contents **Remote control unit only**



- Each time the key is pressed, the edited CD track Nos. are displayed in order.

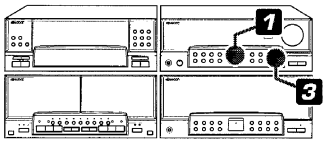
To clear the edited contents



- The edited data is cleared entirely.

Recording CD while listening to another source

Use the following procedure to listen to another input source while recording CD onto tape.



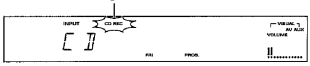
Preparations

→ P. 40

- Load a cassette tape in the deck B.
- Select the tape transport direction (◄ or ►).
- Select "⇉" (two-side recording) or "⇄" (one- side recording).
- Select the Dolby NR mode.
- Select the "CD" input with the **MAIN INPUT** key.
- Insert a disc in the CD player.

1 Press the CD REC key.

Lights.

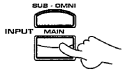


2 Start recording of CD.

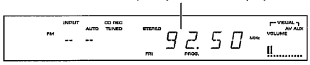
→ P. 41

3 Select the source to be played during recording.

Select other input source than "TAPE".



The source component to be listened to or a frequency should be displayed.



To cancel CD REC.

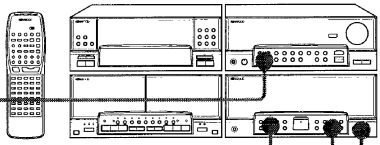
- The CD REC cannot be cancelled while the REC indicator is lighting or blinking.
- After the CD REC operation, be sure to press the **CD REC** key to cancel it.

Note

In the CD REC operation, the equalizer and DSP presence effects cannot be recorded together with the CD sound.

Simplified tone adjustment

- The AI determines the optimum tone setting for the music played.
- 15 tone patterns are preset for easy recalling.
- The tone can be adjusted as desired, and the adjusted data can be stored in memory.



AI LINK
→ P. 61

The AI sets the optimum equalizer curve automatically every time a presence sound field is selected or canceled.

REFERENCE/MANUAL
→ P. 58

Up to 15 tone patterns can be selected. The user can create desired equalizer curves and store them in 5 of these preset patterns.

REC MODE
→ P. 58

The optimum tone settings for use in recording of tapes to be played exclusively on a car stereo or headphone stereo are provided.

AI AUTO/AI FOCUS
→ P. 58

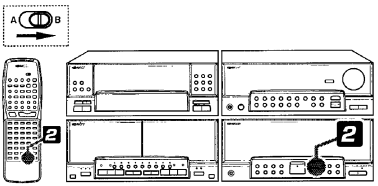
AI AUTO: The AI creates the optimum tone setting for the disc to be played.
AI FOCUS: The AI creates the optimum tone setting for the presence playback of CD.

Demonstration

The demonstration reproduces the effects which can be provided by the graphic equalizer in sequence. The display also changes as the effects change. Try demonstration and confirm the effects both visually and audibly.

1 ***Play the desired music.***

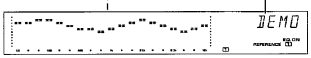
2 ***Select "DEMO".***



Each press of the key changes the display contents as follows.

① Graphic equalizer
② Spectrum analyzer
③ Demonstration
④ Display OFF

"DEMO" should be displayed.

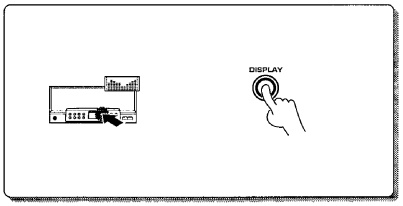


- Press the **DISPLAY** key again to end demonstration.

What is AI?

This is the abbreviation of "Artificial Intelligence".

Switching the displayed contents



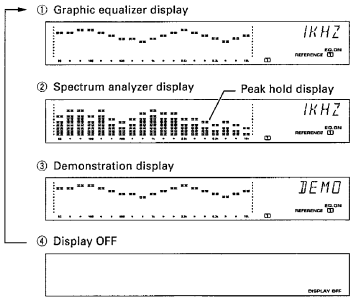
Graphic equalizer display:
Shows how the frequency bands are compensated for.

Spectrum analyzer display:
Shows the levels of frequency bands that vary according to the progress of sound.

Demonstration display:
The equalizer curves change one after another.

Display OFF:
Select this status when no display is required. The equalizer is still active when when the display is OFF.

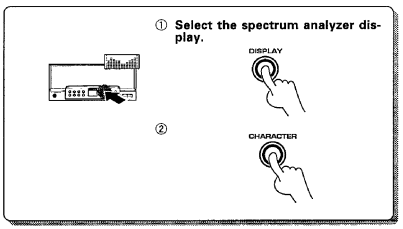
Each press changes the display contents as follows.



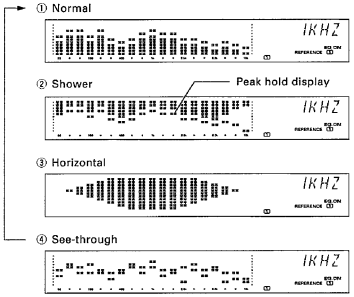
Character displays

The changes in the levels of the frequency bands can be displayed in various patterns.

Press during the spectrum analyzer display.



Each press switches the display patterns as follows.



AI AUTO

When the AI key is pressed before playing a CD, the recording in the CD is analyzed in about 30 seconds and the optimum equalizer curve and the LINEAR ACOUSTIC CONTROL setting (volume balance between the main and omni speakers) are set automatically. After this, the CD starts to be played from the first track.

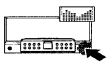
AI FOCUS

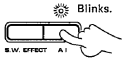
When playing a CD with a DSP presence mode, the AI FOCUS sets the optimum ASFC (a setting element determining the sound field expansion) value in addition to the setting made with the AI AUTO.

Playing CD with optimum tone setting (AI AUTO)

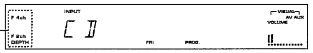
1 ***Press one of the disc selector keys to select the CD to be played.***

2 ***Press the AI key.***



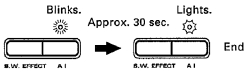


Goes off.



- Ensure that the **F.4CH**, **F.2CH** and **DEPTH** indicators are off.

- In approx. 30 seconds, playback starts from the first track.



To cancel

During AI setting : Press the **AI** key again. (The equalizer curve immediately before will be recalled.)
After AI setting : Press the **FLAT** key. (The equalizer curve becomes flat.)

- The setting is also canceled when one of the **LINEAR ACOUSTIC CONTROL** keys or the ■ key of the CD player is pressed.

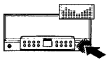
Playing CD with enhanced presence effect (AI FOCUS)

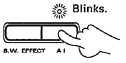
1 ***Press one of the disc selector keys to select the CD to be played.***

2 ***Select a presence sound field.***

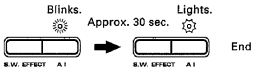
Each press switches the sound fields as follows.

3 ***Press the AI key.***





- In approx. 30 seconds, playback starts from the first track.



To cancel

During AI setting : Press the **AI** key again. (The equalizer curve immediately before will be recalled.)
After AI setting : Press the **FLAT** key. (The equalizer curve becomes flat.)

- The setting is also canceled when one of the **LINEAR ACOUSTIC CONTROL** keys or the ■ key of the CD player is pressed.

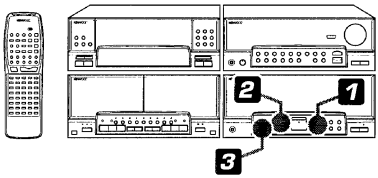
Playing music with desired tone

15 kinds of preset equalizer curves can be recalled with simple operation. These patterns can be selected according to the tone and the category of music. Use them also according to your liking.

Preparations

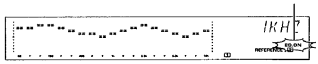
→ P.22 CD
→ P.30 TAPE
→ P.34 TUNER

- Receive a radio station or play a CD or cassette tape.

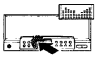


1 Switch the graphic equalizer effect ON.

Lights.

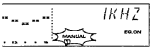


2 Select the desired pattern.

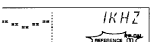


Each press changes the pattern names as follows.

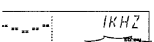
① **MANUAL** (Clear)
Clear tones based on proper compensations of the frequency bands.



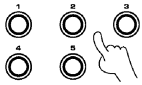
② **REFERENCE 1** (Basic)
Basic tones with proper enhancement of low and high frequency bands.



③ **REFERENCE 2** (Scale)
Crisp tone by enhancing the frequency bands.



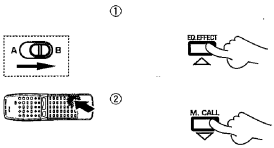
3 Select the music category.



- Select the category according to the genre or contents of the music played.
- The following five categories are available for each of **MANUAL**, **REFERENCE 1** and **REFERENCE 2**.

1 → Popular, fusion
2 → Rock
3 → Jazz
4 → Classic
5 → Movie

Operations on the remote control unit



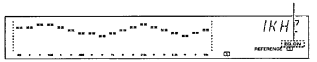
Each press of the **M.CALL** key changes the patterns and categories as follows.

① **MANUAL** (Clear) 1 → 2 → 3 → 4 → 5
② **REFERENCE1** (Basic) 1 → 2 → 3 → 4 → 5
③ **REFERENCE2** (Scale) 1 → 2 → 3 → 4 → 5

To cancel

Press the **EQ.EFFECT** key again.

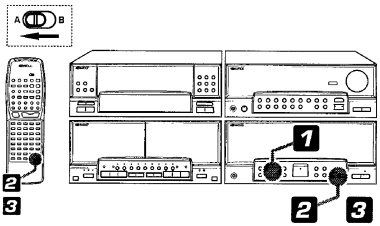
Goes off.



- The equalizer curve on the display remains.

Creating desired tone

GRAPHIC EQUALIZER

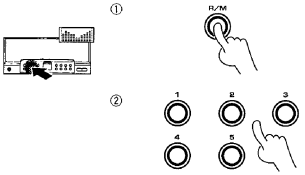


Preparations

- → P. 22 CD
- → P. 30 TAPE
- → P. 34 TUNER

- Play the desired source.
- Press the **EQ.EFFECT** key to switch the graphic equalizer effect on.
- Press the **DISPLAY** key to display the graphic equalizer display. → P. 54

1 Select an equalizer curve.



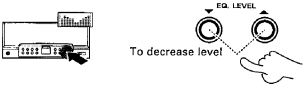
- Select the equalizer curve with the closest pattern to the curve to be created.
- When the **FLAT** key is pressed, a curve can be created from a flat condition.

2 Select the frequency band to be adjusted.

Properties of frequency bands

Low frequency bands 63~160 Hz	Musical instruments in the low bands sound with stable feeling.
Medium frequency bands 400 Hz~2.5kHz	The vocal of singers seem to come to the front or go to the deep depending on the level adjustment.
High frequency bands 6.3 kHz	When the level is increased, the sounds of violin, flute, etc., become brighter.
Ultra-high frequency bands 16 kHz	The triangle, cymbal, etc. sounds brighter and the sound become more delicate.

3 Adjust the level of the frequency band.

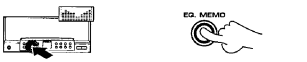


- If there is another frequency band to be adjusted, repeat steps 2 and 3 for that band.

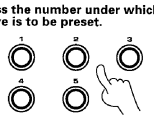
Storing the desired tone in memory

Preset the user-created equalizer curve.

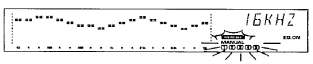
① **Press the EQ.MEMO key.**



② **Press the number under which the curve is to be preset.**



"MEMORY" lights.

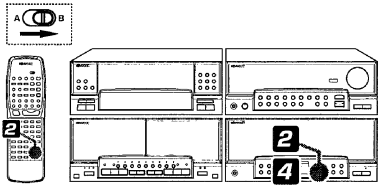


"1" to "5" blink.

- Perform step ② while the **MEMORY** indicator is blinking.
- The user-created equalizer curve is preset under the pressed number as one of the **MANUAL** patterns.
- If an equalizer curve has already been preset under the pressed key, it will be replaced by the new equalizer curve.

To clear the equalizer curve created and stored by the user

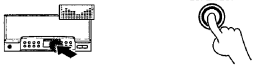
Select the MANUAL patterns with the **R/M** key and hold the key under which the curve to be cleared has been stored. It will be cleared and the equalizer curve originally preset in the unit will be recalled.



Recording tape for playback on car stereo or headphone stereo

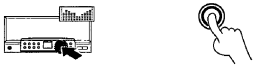
1 ***Play the source sound to be recorded.***

2 ***Switch the graphic equalizer effect ON.***



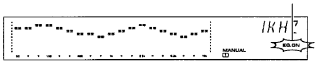
3 ***Select the desired equalizer curve.***

4 ***Select car stereo or headphone stereo.***

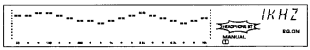


5 ***Start recording.*** → P.41

Lights.



Display when "HEADPHONE ST." is selected



Each press changes the patterns as follows.

① **CAR** : Curve for playback on car stereo.

② **HEADPHONE ST.** : Curve for playback on headphone stereo.

③ Indicator OFF : Curve before the **REC MODE** key is pressed.

- The equalizer curve for car stereo playback or headphone stereo playback is combined with the equalizer curve which has been displayed until then.
- Do not use this function when the unit is used as an ordinary equalizer or when recording tapes which are not played exclusively on a car stereo or headphone stereo.

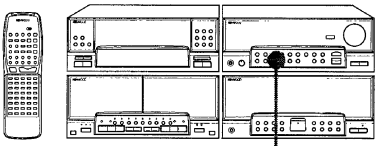
To cancel

Press the key so that both "CAR" and "HEADPHONE ST." go off.

- The last curve which had been displayed until the **REC MODE** key was pressed is displayed again.

Presence effects

Various modes for reproducing the effects of presence are available. Select the mode according to the played source or the component in your system.



DEPTH modes

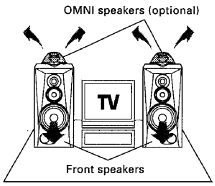
→ P. 64

These modes control the feeling of depth in the sound. They can be used regardless of the number of speakers and the played source.

Available modes:
VOCAL, INST (Instrumental)

DSP presence modes

→ P. 60



Front 4-channel (F.4CH) mode

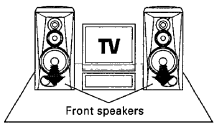
Four kinds of presence effects can be reproduced easily through the front and OMNI speakers.

Available sound fields:
ARENA, JAZZ CLUB, STADIUM, MOVIE

Front 2-channel (F.2CH) mode

Presence effects can be reproduced with the front speakers alone. Four kinds of presence effects can be reproduced similarly to the front 4-channel mode.

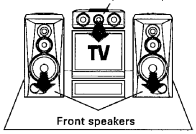
Available sound fields:
ARENA, JAZZ CLUB, STADIUM, MOVIE



DOLBY 3 STEREO mode

→ P. 65

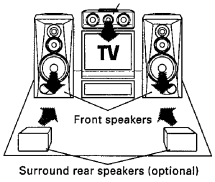
This mode can be used with video software programs recorded with ordinary stereo audio. It improves the acoustic image positioning of words, etc., by applying a processing called directional enhancement and using a center speaker.



DOLBY PRO LOGIC SURROUND mode

→ P. 66

When a videotape or LD software program carrying DOLBY SURROUND mark is played in this mode, the similar Dolby Surround effect to movie theaters can be enjoyed with full of presence.
The use of surround rear speakers (optional) is required when using this mode.
The presence effect can be further improved by connecting the center speaker (optional).



What is DSP?

DSP stands for Digital Signal Processor. The way the sound reverberates is variable depending on various conditions. The front 4-channel and front 2-channel modes use the DSP to create the reverberation components (sound reverberation elements in various spaces) determining the presence effect from ordinary 2-channel stereo audio.

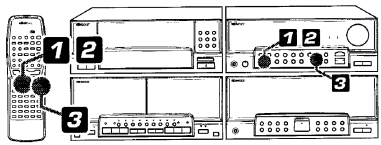
Enjoying music with feeling of presence (presence modes)

In F.4CH mode:

The main speakers output music while the OMNI speakers (optional) output presence effect sound.

In F.2CH mode:

The main speakers output both music and presence effect sound.



The OMNI speakers (OMNI-A5, optional) must be used for presence play in the F.4CH mode.

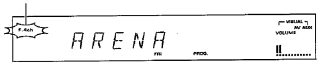
Preparations

- → P. 22 CD
- → P. 30 TAPE
- → P. 34 TUNER

• Receive a radio station or play a CD or cassette tape.

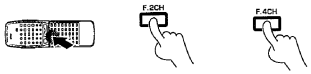
1 *Select F.2CH or F.4CH.*

Lights.



• Select F.4CH or F.2CH according to the speakers used in your system. → P. 59

2 *Select a presence sound field.*



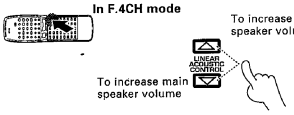
Each press switch the presence modes as follows.

① *ARENA*
Reproduction of a live feeling as if the listener is in the first row of the arena seat.
② *JAZZ CLUB*
Reproduction of a jazz live house where cymbals resound.
③ *STADIUM*
Reproduction of an open atmosphere with little reverberations which are usually reflected from the ceiling.
④ *MOVIE*
Reproduction of reverberations and feeling of presence proper to movie theaters.

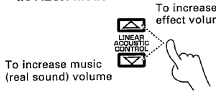
• The LINEAR ACOUSTIC CONTROL is set automatically according to the selected sound field.

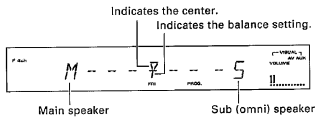
3 *Adjust the volume balance.*

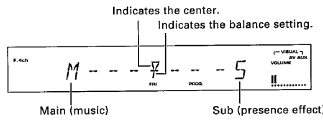
In F.4CH mode

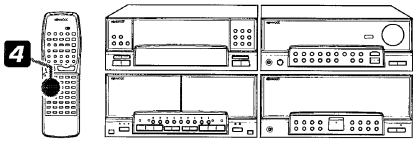


IN F.2CH mode

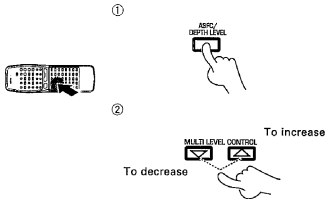




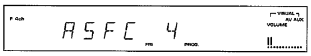




4 *Adjust the sound field expansion.*

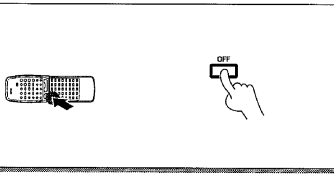


The **ASFC** key and **MULTI LEVEL CONTROL** keys allow to adjust the sound field expansion in of 7 steps. The sound field expansion is enhanced as the displayed figure increases.

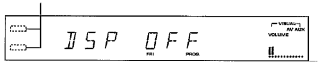


- Adjust to obtain the desired sound when you did not press the **AI** key or when playing other source than CD.

To cancel presence play



Goes off.



- Be sure to switch OFF when presence play is not required.

AI LINK equalizer effect

When a sound field is selected or canceled, the AI sets the optimum equalizer curve automatically to enhance the effect of the sound field.

What is sound field expansion?

The reason why sound is heard differently in halls and in outdoor stadiums or live performance lines in the difference in the distribution of indirect sounds.
The ASFC express sound field expansion by controlling the levels of these indirect sounds.

What is ASFC?

ASFC stands for Acoustic Surround Field Control.

Presence effect plus Environmental sound

In F.4CH mode:

The main speakers output music while the OMNI speakers (optional) output presence effect sound and environmental sound (the source selected with the SUB-OMNI INPUT key).

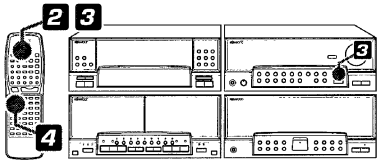
In F.2CH mode:

The main speakers output music, presence effect sound and environmental sound.

Preparations

- → P.22 CD
- → P.30 TAPE
- → P.34 TUNER

- Receive a radio station or play a cassette tape.



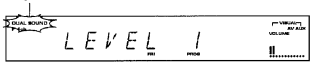
The OMNI speakers (OMNI-A5, optional) are required to combine the F.4CH sound and environmental sound.

1 Select a desired sound field in the F.2CH or F.4CH mode.

- Four sound fields are available.
  (ARENA, JAZZ CLUB, STADIUM, MOVIE)
- The LINEAR ACOUSTIC CONTROL is set automatically according to the selected sound field.

2 Adjust the sound level of the environmental sound.

Lights.



Each press changes the sound levels as follows.

- ① LEVEL 1 (Environmental sound volume: Low)
- ② LEVEL 2 (Environmental sound volume: Medium)
- ③ LEVEL 3 (Environmental sound volume: High)
- ④ DUAL OFF (Environmental sound is not output) ... **"DUAL SOUND"** indicator OFF

3 Play an environmental sound.

① **Select the input source to be played.**

Lights.

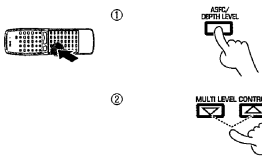
Each press changes the sources as follows.

- ① CD
- ② TAPE
- ③ MD/DAT
- ④ AV AUX

② **Start playing the selected component.**

- The sub (omni) input source cannot be selected while the **DUAL SOUND** indicator is off.

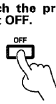
4 Adjust the sound expansion.



- Adjust the ASFC as desired. → P.61

To cancel

Switch the presence effect OFF.



Remote control unit

Switch the DUAL SOUND OFF.

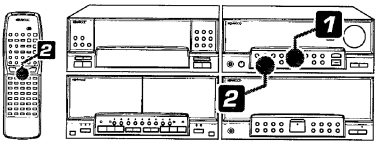
Remote control unit

Recording music with presence effect

Preparations

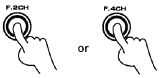
– P. 40

- Load a cassette tape in deck B.
- Select the tape transport direction (◄ or ►).
- Select the Dolby NR mode.
- Insert disc(s) in the CD player.
- Select the "CD" or "TUNER" input with the **MAIN INPUT** key.



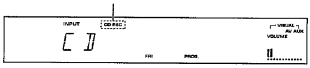
1 Switch CD REC OFF.

2 Select a sound field in the F.2CH or F.4CH mode.

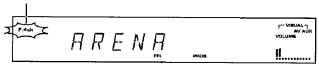


3 Play music and record it.

Goes off.



Lights.



Each press switches it follows.

① ARENA
Reproduction of a live feeling as if the listener is in the first row of the arena seat.

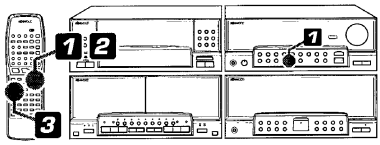
② JAZZ CLUB
Reproduction of a jazz live house where cymbals resound.

③ STADIUM
Reproduction of an open atmosphere with little reverberations which are usually reflected from the ceiling.

④ MOVIE
Reproduction of reverberations and feeling of presence proper to movie theaters.

- The LINEAR ACOUSTIC CONTROL is set automatically according to the selected sound field.
- When an environmental sound is combined, the sound of the sub (omni) input is mixed in the recording.

Controlling the depth of sound (DEPTH)



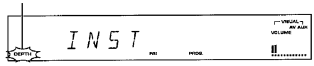
Preparations

→ P.22 CD
→ P.30 TAPE
→ P.34 TUNER

- Receive a radio station or play a CD or cassette tape.

1 Switch the DEPTH function ON.

Lights.



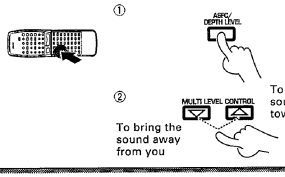
- The current mode is displayed.

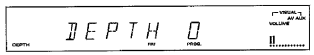
2 Select the mode.

Each press changes the modes as follows.

① VOCAL..... Mode for adjusting the depth of vocal.
② INST..... Mode for adjusting the depth of instrumental sound.

3 Adjust the feeling of depth of sound.

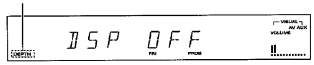




The feeling of depth of sound can be adjusted in 5 steps. The sound comes towards you as the displayed figure increases.

To cancel DEPTH

Goes off.



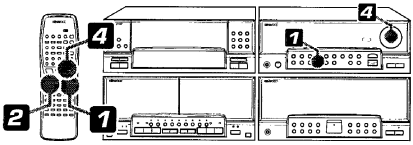
Adjustment and playback of DOLBY 3 STEREO

The Dolby 3 STEREO provides a active center channel to produce a better, stable center image. This mode can be used when listening to stereo video program and music or when surround listening or surround system set-up is not possible.

Preparations

→ P.9

- Be sure to set the center mode properly according to the arrangement of the speakers in your system.

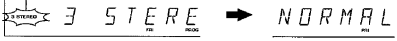


In the DOLBY 3 STEREO mode, sound is not output through the OMNI speakers (optional). Also, the DUAL SOUND key is deactivated in this mode.

1 *Set the Dolby 3 STEREO mode.*

Light up

Center mode display



2 *Adjust the volume balance.*

① **Output the test tone.**

② **Adjust so that the volumes of the center speaker is identical to the main speaker volume.**

(1) Select CENTER

(2) Adjust

③ **Stop generating the test tone.**

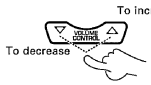
- Noise-like test tone moves across the speakers every 1.5 second.

→① TEST L (Left)
② TEST C (Center)
③ TEST R (Right)

- When one of the **MULTI LEVEL CONTROL** keys is pressed, the current volume level is displayed. While the level is displayed, it can be adjusted in 1 dB steps every time one of the keys is pressed.
- The volume level can be adjusted in the range from -30 to +10 dB.
- The center level is stored in memory as the common setting with the DOLBY PRO LOGIC SURROUND mode.

3 *Play a video software program.*

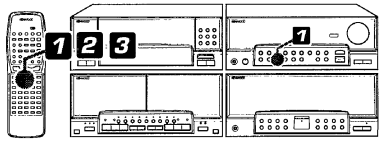
4 *Adjust the listening volume.*



To cancel DOLBY 3 STEREO play

Dolby Surround adjustment

When video (LD) software carrying DOLBY SURROUND mark is played, this mode provides the similar Dolby Surround effect to movie theaters.



In the DOLBY PRO LOGIC SURROUND mode, sound is not output through the OMNI speakers (optional). Also, the DUAL SOUND key is deactivated in this mode.

Preparations

- Be sure to set the center mode properly according to the arrangement of the speakers in your system.

→ P. 9

1 *Set the Dolby Surround mode.*

Lights up

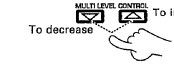
Center mode display

2 *Set the delay time.*

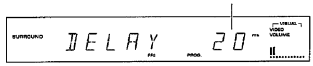
→ P. 67

① **Select DELAY TIME.**

② **Adjust.**



Delay time display



- When the **DELAY TIME** key is pressed, the current delay time is displayed. The delay time can be adjusted in 5 steps with the **MULTI LEVEL CONTROL** keys.
- The delay time can be adjusted in the range from 16 to 29 ms.
- Once the delay time has been set, it is stored automatically in memory and will not change until it is set again.

3 *Adjust the volume balance.*

① **Press the TEST TONE key.**

- Noise-like test tone moves across the speakers every 1.5 second.

In NORMAL or WIDE BAND mode:

① TEST L (Left)
② TEST C (Center)
③ TEST R (Right)
④ TEST S (Surround)

In PHANTOM mode:

① TEST L (Left)
② TEST R (Right)
③ TEST S (Surround)

② **Adjust so that the volumes of the center and rear speakers are identical to the main speaker volume.**

(1) Select the channel.

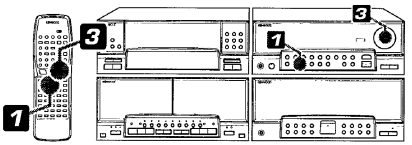
(2) Adjust.

- When one of the **MULTI LEVEL CONTROL** keys is pressed, the current volume level is displayed. While the level is displayed, it can be adjusted in 1 dB steps every time one of the keys is pressed.
- The volume level can be adjusted in the range from -30 to +10 dB.
- The center level is stored in memory as the common setting with the DOLBY 3 STEREO mode.

③ **Stop the test tone.**

Operation of Dolby Surround playback

Before using the Dolby Surround mode, be sure to perform the "Dolby Surround field adjustment" procedure.

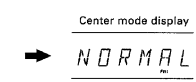


In the DOLBY PRO LOGIC SURROUND mode, sound is not output through the OMNI speakers (optional). Also, the DUAL SOUND key is deactivated in this mode.

1 *Set Dolby Surround mode.*

Light up

Center mode display



2 *Play a software program encoded with Dolby Surround.*

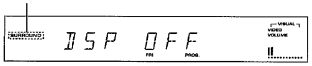
3 *Adjust the volume.*

To increase

To decrease

To cancel DOLBY SURROUND play

SURROUND goes off.

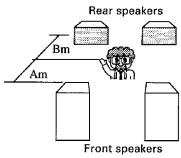


How to calculate the delay time

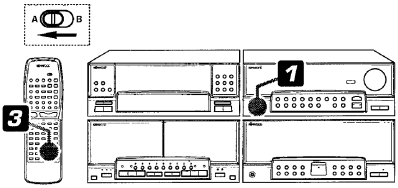
The optimum delay time varies depending on the position where the listener is located. Calculate the optimum delay time referring to the following illustration,

Delay time (ms) = 20 ms + 3 ns × (A - B)
For example, if A = 5 m and B = 3 m;
20 ms + 3 ms × (5 - 3) = 26 ms

Use the integral value which is closest to the calculation result.



A: Distance from the front speakers
B: Distance from the rear speakers



Easy karaoke singing (HIT MASTER)

1 Connect a microphone.

① **Turn the MIC MIXING control fully counterclockwise.**

② **Plug the microphone into the MIC jack.**

- Use a microphone equipped with a mini-plug.

③ **Adjust the volume balance between the music input and microphone input.**

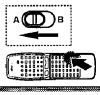
To decrease microphone volume ← MIC MIXING → To increase microphone volume

- Set the **MIC MIXING** control to the fully counterclockwise position when the microphone is not used.

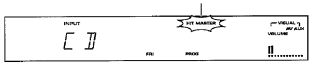
2 Play the music.

- Use other mode than the DOLBY PRO LOGIC SURROUND, DOLBY 3 STEREO,SOURCE DIRECT and DEPTH modes.

3 Press the HIT MASTER key.



Lights.



- The volume of the vocal parts of the song decreases. However, this effect may not be clear with some songs and discs.

4 Sing along the accompaniment.

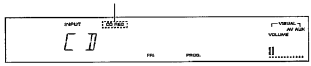
- Adjust the overall volume with the **VOLUME CONTROL** knob.

To record karaoke singing

During karaoke singing using the song recorded on a tape, the karaoke sound cannot be recorded.

① **Check that the CD REC indicator is not lit.**

OFF



②

③ **Start recording.** → P.41

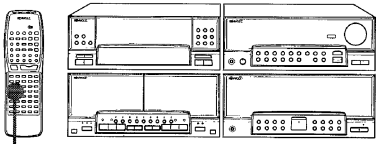
A karaoke tape can be created by recording the performance while the **MIC MIXING** control is in the fully counterclockwise position.

Timer operation

Adjust the clock before setting the timer.

TIMER

In addition to the ordinary timer reservation function (program timer), three convenient timer operations are provided for use according to the purposes.



Sleep timer

→ P.74

The power is turned OFF automatically after the specified period has elapsed.

One-touch timer

→ P.74

The power ON time can be set with a simple, one-touch operation.

Program timer

→ P.70

The power is turned ON at the ON time and turned OFF at the OFF time to allow playing a radio station, tape or CD or recording a radio station. Up to four timer programs can be reserved.

Wake-up timer (AI TIMER 1/2)

→ P.79

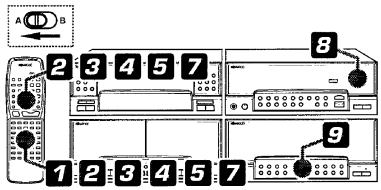
The wake-up timer function can be set additionally to the program timer programs.

AI TIMER 1: When the power is turned ON, the volume increases gradually.

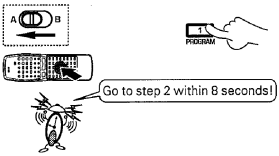
AI TIMER 2: Timer play starts with CD playback then radio station is received automatically after it.

Timer program reservation

Adjust the clock before setting the timer.



1 Start program timer reservation operation.

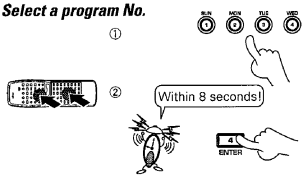


SELECT PROGRAM

Blinks.

- The program No. (1-4) indicators blink.

2 Select a program No.

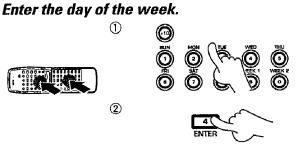


PNO

Blinks.

- The selector program No. indicator blinks.
- If a program No. under which a timer program hasalready been reserved, it is replaced by the new timer program.

3 Enter the day of the week.



DAY

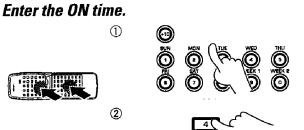
Blinks. Blinks.

- If you make a mistake, press the **CLEAR** key and restart the entry.

In addition to Sunday through Saturday, the following three patterns are available.

EVERY : Every day from Monday through Sunday.
WEEK 1: Every day from Monday through Saturday.
WEEK 2: Every weekday from Monday through Friday.

4 Enter the ON time.



ON 00:00

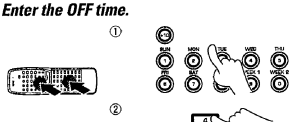
Blinks.

Press the numeric keys as follows.

To enter 6:30AM: 0, 6, 3, 0

- If you make a mistake, press the **CLEAR** key and restart the entry.

5 Enter the OFF time.



OFF 00:00

Blinks.

Press the numeric keys as follows.

To enter 7:00AM: 0, 7, 0, 0

- If you make a mistake, press the **CLEAR** key and restart the entry.

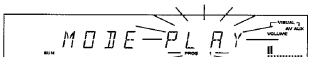
6 Make the desired reservation.

To listen to radio, CD or tape

① SELECT MODE

Select "PLAY". (Each press alternates "PLAY" and "REC").

→①PLAY
②REC



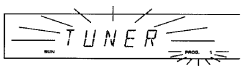
Blinks.

Enter it.

② SELECT SOURCE

Select the source to be played. (Each press switches the following).

→① TUNER : Radio
② CD : CD
③ TAPE : Tape
④ LAST : Last source which has been played



Blinks.

Enter it.

③ **Make preparations for the play.**

To listen to radio

SELECT PRESET

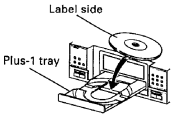
Select the preset station No.

Enter it.

The station to be received with timer must be preset beforehand. → P. 36

To listen to CD

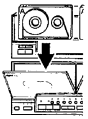
Place a disc on the Plus-1 tray.



Program playback is not possible.

To listen to tape

Insert a tape.



If tapes are inserted in both decks A and B, playback starts with the tape in deck B.

To record radio

① SELECT MODE

Select "REC".

→①PLAY
②REC

(Each press alternates PLAY and REC.)

Enter it.

② SELECT PRESET

Select a preset station No.

Enter it.

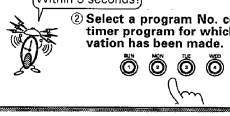
③ **Make preparations for recording.** → P. 40

7 Select the timer program No. to be used.

①

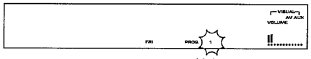
Within 8 seconds!

② **Select a program No. containing a timer program for which the reservation has been made.**



Blinks.

- The selected program No. lights.
- The timer will not function unless a program No. is selected.



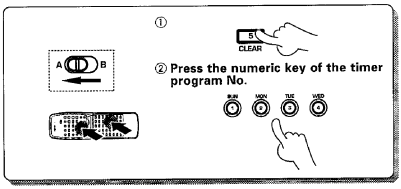
Lights.

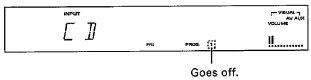
- When recording radio, the listening volume is automatically set to the minimum volume at the moment the power is turned ON by the timer.

8 Adjust the listening volume.

9 Turn the power OFF.

To continue play after the power is turned ON by the timer

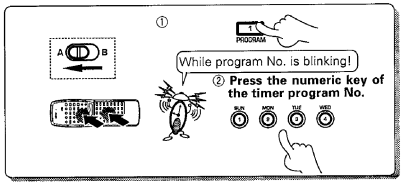




Goes off.

- Check that the program No. indicator of the timer program being executed is not lit.

Check the reservation content.

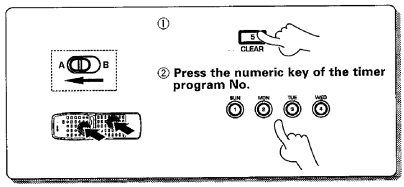


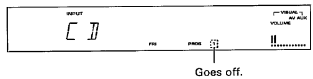
- The reserved contents will be displayed for 3 seconds per item. After this, the previous display content appears again.

To change the reserved contents

Restart the procedure of "Timer program reservation" from the beginning.

When timer operation is not required

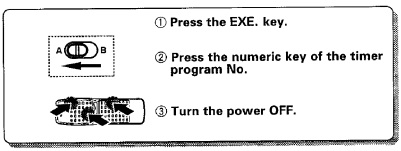




Goes off.

- The reservation contents are held in memory.

To set the same timer program again



- Also prepare the disc or tape and adjust the listening volume.

Note

The reservation contents cannot be cleared. The contents are cleared only when they are changed.

AI TIMER operation

Adjust the clock before setting the timer.

The AI TIMER function can be used additionally to the time setting made with the program timer. It is also possible to use AI TIMER 1 and AI TIMER 2 simultaneously.

Gradual increase of volume (AI TIMER 1)

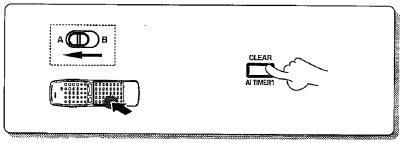
With this function, the volume increases gradually when the power is turned ON by the program timer.

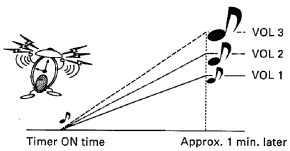
Preparations

→ P. 70

- Set a timer program.
- Turn the power OFF.

Press the AI TIMER 1 key.



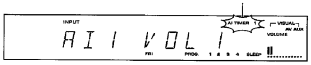


- The equalizer curve also changes.

Select the maximum volume. It changes every time the key is pressed.

→ ① AI 1 OFF (AI TIMER 1 is not used)
② AI 1 VOL 1 (Lower)
③ AI 1 VOL 2 (Medium)
④ AI 1 VOL 3 (Larger)

Lights.



- If the volume is adjusted with the remote control unit or the graphic equalizer is operated during operation of AI TIMER 1, the volume is fixed at that moment.

To cancel AI TIMER 1

Press the **AI TIMER 1** key to select "AI 1 OFF" and turn the indicator off.

Playing CD then receiving radio (AI TIMER 2)

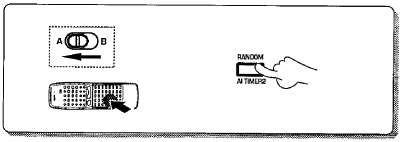
With this function, when the power is turned ON by the timer, two CD tracks are played first then the last radio station which was received before is received automatically.
AI TIMER 2 is executed in priority over other program timer.

Preparations

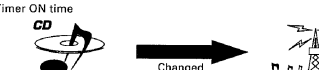
→ P. 70

- Place a disc on the Plus-1 tray of the CD player.
- Set the program timer so that a radio station can be received.

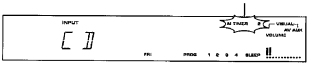
Press the AI TIMER 2 key.



Timer ON time



Lights.



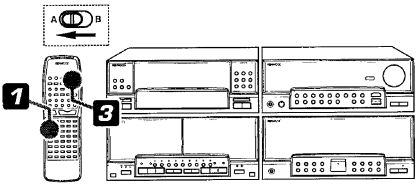
- If the input is changed or an operation key of the CD player is pressed during CD playback started by AI TIMER 2, the CD playback ends and AI TIMER 2 is cancelled.
- If the CD has no been placed, radio station will be received from the moment the power is turned ON.

To cancel AI TIMER 2

Press the **AI TIMER 2** key to turn the indicator off.

Notes

1. The AI TIMER 1 and 2 indicators remain lit even after the program timer operation. When the functions of AI TIMER is not required, be sure to switch the indicators off.
2. The AI TIMER does not function with timer recording.



One-touch timer reservation

1 Enter the ON time.

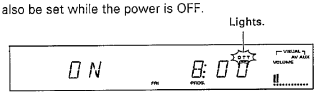
2 Prepare the music source component to be played.

Select the desired input by pressing the MAIN INPUT key.

→ P.22 CD
→ P.30 TAPE
→ P.34 TUNER

3 Turn the power OFF.

- At the first press, an ON time with the figures of minute ending with 00 or 30 within 30 minutes from the present time is set (example: 7:40 → 8:00). Hereafter, each press adds 30 minutes to the set time. The ON time can be set up to 12 hours after the present time.
- It can also be set while the power is OFF.



- If the disc is not present in case of timer CD playback or if the cassette tape is not present in case of timer tape playback, the last radio station received before will be received.
- Press the **O.T.T.** key once to check the set ON time.
- At the moment the power is turned ON by the one-touch timer, a sleep timer 60 minutes is set automatically.

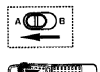
To cancel

Turn the power ON or press the **O.T.T.** key until the **O.T.T.** indicator goes off.

Sleep timer reservation

Set the number of minutes after which the power is to be turned OFF.

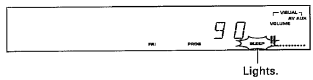
① **Turn the power ON.**



② **Set the time.**

- The power is turned OFF automatically after the set time has elapsed.
- Each press decreases the time by 10 minutes. The maximum time that can be set is 90 minutes.

90 → 80 → 70 → 60 → 50 → 40 → 30 → 20 → 10 → Cancel



To cancel

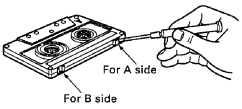
Turn the power OFF or press the **SLEEP** key until the sleep time is cancelled.

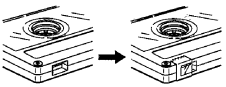
Note

The one-touch timer is canceled when the **ADJUST** key is pressed to adjust the clock.

Notes on cassette tape

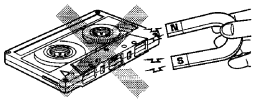
Safety tab (accidental erasure prevention tab)
After an important recording has been finished, break the safety tab, to prevent the recorded contents from being erased or recorded on accidentally.



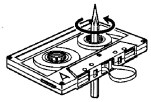


To re-record Apply tape only to the position where the tab has been removed.

To store cassette tapes
do not store the tapes in a place which is subject to direct sunlight, or near equipment that generates heat. Keep the cassette tapes away from any magnetic field.



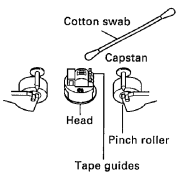
When there is slack in the tape
In such a case, insert a pencil into the reel hole and wind the reel hub to remove the slack.



Notes

1. 120-minute cassette tape
   Since a 120-minute cassette tape is very thin, the tape could adhere to the pinch roller or be easily cut. It is recommended that these tapes not be used with this unit to prevent possible damage.
2. Endless tapes
   Do not use an endless tape, as this could damage the mechanism of the unit.

Cleaning the head section



Cleaning the heads and periph eral components
For maintaining the best condition of the deck and for longer service life, always keep the heads (recording / playback / erase), capstan and pinch roller clean. To clean them, perform the following:

1. Open the cassette holder.
2. Using a cotton swab dipped in alcohol, clean the head (recording / playback / erase), capstan and pinch roller carefully.

Demagnetizing the head
When the recording / playback head is magnetized, the sound quality will be deteriorated. In such a case, demagnetize the head using a commercially available demagnetizer (head eraser).

Note

There are precisely aligned parts around the heads, including the tape guides. When cleaning, pay special attention so as not to apply shock to them.

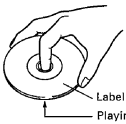
Beware of condensation

When water vapor comes into contact with the surface of cold material, water drops are produced.
If condensation occurs, correct operation may not be possible, or the unit may not function correctly.
This is not a malfunction, however, and the unit should be dried. (To do this, turn the POWER switch ON and leave the unit as it is for several hours.)

Be especially careful in the following conditions:

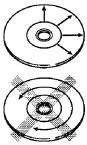
- When the unit is brought from a cold place to a warm place, and there is a large temperature difference.
- When a heater starts operating.
- When the unit is brought from an air-conditioned place to a place of high temperature with high humidity.
- When there is a large difference between the internal temperature of the unit and the ambient temperature, or in conditions where condensation occurs easily.

Disc handling precautions



Handling
Hold compact discs so that you do not touch the playing surface.

Do not attach paper or tape to either the playing side or the label side of compact discs.



Cleaning
If fingerprints or foreign matter become attached to the disc, lightly wipe the disc with a soft cotton cloth (or similar) from the center of the disc outwards in a radial manner.

Storage
When a disc is not to be played for a long period of time, remove is from the CD player and store it in its case.

Caution on disc used

Never play cracked or warped disc.
During playback, the disc rotates at high speed in the player. Therefore, to avoid danger, never use a cracked or deformed disc or a disc repaired with tape or adhesive agent.

When your unit needs to be repaired, bring the entire set (Speakers excluded) to your dealer.

WARNING NOTICE:

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Memory backup function

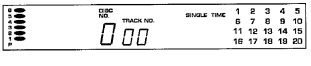
Stored contents cleared immediately when power plug in unplugged from power outlet	Clock of preamplifier / tuner unit
Stored connects cleared in at least 3 days after power plug is unplugged from power outlet	Preset stations of preamplifier / tuner unit Graphic equalizer patterns (user-created patterns)

Note related to transportation and movement (CD player)

Before transporting or moving this unit, carry out the following operation.

① **Turn the power ON but do not load a disc.**
② **Wait a few seconds and verify that the display shown appears.**

Without magazine, press the ▶/II key.



③ **Turn the power OFF.**

In case of difficulty

Remote control unit

Symptom	Cause	Remedy
Remote control operation is not possible.	• Batteries are exhausted. • The remote control is too far apart from the system, the controlling angle is deviated or there is an obstacle in between. • The parallel cord is not connected properly. • There is no tape or CD set in the component to be played. • An attempt is made to play the cassette deck which is recording something. • The A/B switch is not set properly.	• Replace with new batteries. • Operate the unit inside the remote controllable range. → P. 18 • Connect properly referring to "Connections". • Set a tape or CD in the component to be played. • Wait until the recording ends. • Set the A/B switch properly.

Preamplifier/tuner unit, power amplifier/graphic equalizer unit, speakers

Symptom	Cause	Remedy
Sound is not produced.	• The speaker cords are disconnected. • The volume control is set to the minimum position. • The MUTE switch of the preamplifier/tuner unit is switched ON. • The headphone plug is inserted into the jack. • The parallel cord is not connected.	• Connect properly referring to "Connections". → P. 10 • Adjust to an optimum volume. • Switch MUTE OFF. • Unplug the headphone plug. • Check the connection of the parallel cord. → P. 8
Sound is not produced from the main speakers.	• The LINEAR ACOUSTIC CONTROL is set inadequately. • The speaker cords are disconnected.	• Adjust the control properly. → P. 20 • Connect properly referring to "Connections". → P. 10
Sound is not produced through headphones.	• The LINEAR ACOUSTIC CONTROL is set inadequately. • The sound is played through the SUB (OMNI) input.	• Adjust the control properly. → P. 20 • Play it through the MAIN input.
Environmental sound cannot be played.	• The DUAL SOUND is OFF (indicator not lit). • The LINEAR ACOUSTIC CONTROL is set inadequately.	• Press the **DUAL SOUND** key to ON. • Adjust the control properly. → P. 20
The STAND BY indicator blinks and sound is not produced.	• The speaker cords are short-circuited.	• Turn the power OFF, remove the short-circuit and turn the power ON again.
Sound is not produced from the left or right speakers.	• The speaker cords are disconnected. • The BALANCE set inadequately.	• Connect properly referring to "Connections". • Adjust the optimum left and right balance. → P. 21
Sound is not produced from the surround rear speakers or center speaker, or their volumes are very low.	• The rear speaker cords are disconnected. • The surround play mode is not activated. • The rear or center volume is set to the minimum level.	• Connect properly referring to "Connections". → P. 11 • Activate a surround mode. • Adjust the rear level. → P. 66
The clock display blinks without changing the figures.	• There was a power failure. • The power cord was unplugged from the outlet.	• Adjust the present time again. • Adjust the present time again. → P. 19
Timer operation is not possible.	• The present time has not been adjusted or there was a power failure. • The timer ON time and OFF time have not been set. • The timer execution was not set up.	• Adjust the present time referring to "Clock adjustment". • Set the timer ON time and OFF time. • Press the **EXE** key to set the execution. → P. 70

Symptom	Cause	Remedy
Radio stations cannot be received.	• The antennas have not been connected. • A proper broadcasting band has not been selected. • The frequency of the station to be received is not uned.	• Connect antennas. → P. 8 • Select a band. → P. 34 • Tune to the frequency of the desired station.
Noise interferes.	• Car ignition noise. • Influence of an electric appliance. • A TV set is installed near the system.	• Install the outdoor antenna in an apart position from the road. • Switch the suspected electric appliance OFF. • Install the TV or the system at an increased distance between them.
A station has been preset but it cannot be received by pressing the numeric key.	• The frequency of the preset station is not tunable. • The preset memory has been cleared because the power cord has been unplugged for a long period.	• Preset stations with tunable frequencies. • Preset stations again. → P. 38

Cassette deck unit

Symptom	Cause	Remedy
Sound cannot be produced by pressing the play key or no operation occurs even when an operation key is pressed.	• The connections of cords are wrong. • The head is dirty. • The tape is wound too tight due to irregular winding. • A nonrecorded tape is played.	• Connect properly referring to "Connections". • Clean the head referring to "Head maintenance". → P. 75 • Try another tape. • Play a recorded tape.
No operation occurs even when an operation key is pressed.	• The cassette holder is not closed completely. • The operation key is pressed immediately after closing the cassette holder. • The operation key is pressed in less than 3 seconds after turning the power ON. • A tape is not inserted in the unit. • The tape is wound too tight due to irregular winding. • The tape is fully wound to one of the reels.	• Close the holder completely. • Press operations keys in more than a few seconds after closing the holder. • Press operation keys after waiting for more than 3 seconds. • Insert a tape. • Try another tape. • Change the tape transport direction or reverse the tape insertion orientation.
The DPSS malfunctions.	• The tape used is not suitable for DPSS, for example the spaces between tunes may be too short.	• Refer to "DPSS". → P. 32
The CCRS does not function.	• A recordable tape is not present in deck B. • A disc is not present in the CD player. • The disc is dirty.	• Insert a recordable tape in deck B and retry operation. • Place a disc in the CD player and retry operation. • Clean the disc, place it in the CD player and retry operation. → P. 76
In dubbing, the tape stops at different moments in ecks A and B.	• This is due to the difference in the tape length or characteristics of the mechanisms of two cassette decks.	• Small time difference does not mean a malfunction.
The cassette holder cannot be opened by pressing the eject key.	• The key is pressed during recording or playback. • The microcomputer is malfunctioning due to external noise.	• Press in stop mode. • Unplug the power cord and plug it again.
Sound is husky or high frequencies are not reproduced.	• The head is dirty. • The tape is stretched or shrunk.	• Clean the head referring to "Head maintenance". → P. 75 • Try another tape.

Symptom	Cause	Remedy
Sound is distorted.	• The recording level has not been set with the **CRLS** key. • The tape being played was recorded with distorted sound.	• Refer to "Recording." → P. 41 • Try another tape.
Noise is noticeable.	• The tape head is magnetized. • External noise is induced. • A tape recorded with Dolby NR ON is played with Dolby NR OFF.	• Demagnetize the head referring to "Head maintenance". • Install the system at a distance from other electric appliances and TV. • Set the Dolby NR to B or C. → P. 30
The recorded volume varies in the middle.	• The MIC MIXING control was turned during recording.	• Do not turn the control during recording.
Sound vibrates.	• The capstans or pinch rollers are dirty. • The tape is wound irregularly.	• Clean the head referring to "Head maintenance". → P. 75 • Wind the tape again by fast forwarding, rewinding or playing from an end to the other.
Recording cannot be started by pressing the record key.	• The recording protect tab of the cassette has been broken. • The cassette holder is not closed completely. • The TAPE input is selected on the preamplifier/tuner unit. • The tape is fully wound to one of the reels.	• Use a cassette with an unbroken recording protect tab or block the hole. • Close the holder completely. • Select the source to be recorded with the **MAIN INPUT** key. → P. 41 • Change the tape transport direction of deck B or reverse the tape insertion orientation.

CD player unit

Symptom	Cause	Remedy
A CD is placed in the player but it cannot be played.	• The disc is placed upside down. • The disc position is displaced. • The disc is extremely dirty. • The disc is scratched. • Dew is condensed on the optics lens.	• Place the disc properly, with the label side facing upward. • Place the disc properly. • Clean the disc referring to "Disc handling precautions". → P. 76 • Try another disc. • Refer to "Be careful of condensation" and remove the condensation by evaporation. → P. 75
Sound is not produced.	• The disc has not been placed. • The player is not put to the play mode. • The disc is extremely dirty. • The disc is scratched. • The connection cords are not inserted securely.	• Place a disc in the CD player. • Press the ▶/II key. • Clean the disc referring to "Disc handling precautions". → P. 76 • Try another disc. • Connect securely.
Sound skips.	• The disc is dirty. • The disc is scratched. • The player is subject to vibration.	• Clean the disc referring to "Disc handling precautions". → P. 76 • Try another disc. • Install the unit in a place not subject to vibrations.

Notes

1. With some tapes, a squeaky noise is produced when the tape is stopped automatically. This is due to the tape protection function, and not a malfunction.
2. Do not use 120-minute tapes, for the tape is too thin and gets easily tangled.
3. This system is microprocessor-controlled, so malfunction may occur due to external noise or interference noise. In such a case, unplug the power cord, plug it and turn power on again.
4. Do not use contact cleaners because it could cause a malfunction. Be specially careful against contact cleaners containing oil, for they may deform the plastic components.

Specifications (For U.K. and Europe)

Pre Amplifier / Tuner unit (C-E9L)

FM Tuner section

Tuning frequency range ..... 87.5 MHz ~ 108 MHz
Sensitivity (DIN at 75 Ω)
MONO ..... 1.0μV / 11.2 dBf
Signal to noise ratio
(DIN weighted at 1 kHz, 65.2 dBf input)
MONO ..... 65 dB
STEREO ..... 62 dB
Selectivity (DIN ± 300 kHz) ..... 64 dB
Stereo separation (DIN at 1 kHz) ..... 40 dB
Frequency response ..... 30 Hz ~ 15 kHz + 0.5 dB, – 3 dB

MW Tuner section

Tuning frequency range ..... 531 kHz ~ 1,602 kHz
Usable sensitivity ..... 12 μV / (500 μV / m)
Signal to noise ratio ..... 48 dB

LW Tuner section

Tuning frequency range ..... 153 kHz ~ 279 kHz
Usable sensitivity ..... 22 μV
Signal to noise ratio ..... 45 dB

Pre Amplifier section

Total harmonic distortion
..... 0.006 % (SOURCE DIRECT, 1 kHz, 200mV)
Input sensitivity / Impedance
MD / DAT, VIDEO, AV AUX ..... 200 mV / 47 kΩ
MIC ..... 1.3 mV / 47 kΩ
N.B. circuit ..... + 8 dB (max.)
(60 Hz)
Output level / Impedance
MD / DAT, VIDEO ..... 200 mV / 2.2 kΩ

VIDEO section

Input level / Impedance
VIDEO (composite) ..... 1 Vp-p / 75 Ω
Input (VIDEO, AV AUX)
Output level / Impedance
VIDEO (composite) ..... 1 Vp-p / 75 Ω
Output (MONITOR OUT, VIDEO)

[General]

Dimensions ..... W: 270 mm (10-5 / 8")
H : 104 mm (4-1 / 8")
D : 328 mm (12-15 / 16")
Weight (net) ..... 2.5 kg (5.5 lb)

Power Amplifier / Graphic equalizer unit (B-E9)

Power amplifier section

Rated power output

STEREO MODE
..... 70 W + 70 W (DIN, 6 Ω)

SURROUND MODE
FRONT ..... 70 W + 70 W (DIN, 6 Ω)
CENTER ..... 10 W (DIN, 8 Ω)
REAR ..... 3 W + 3 W (DIN, 8 Ω)
Total harmonic distortion
..... 0.02 % (1 kHz, 1 / 2 Rated power, 6 Ω)
Frequency response
..... 20 Hz ~ 70 kHz, + 0 dB, – 1.0 dB
Signal to noise ratio
..... 105 dB (IHF'66)
Input sensitivity / Impedance
..... 1.0 V / 47 kΩ
Output level / Impedance
SUPER WOOFER PRE OUT ..... 2.0 V / 600 Ω
OMNI PRE OUT ..... 2.2 V / 600 Ω

Graphic equalizer section

Individual channel ..... 63 Hz, 160 Hz, 400 Hz,
1 kHz, 2.5 kHz, 6.3 kHz, 16 kHz
Equalizer characteristic variable range
..... ± 10 dB

[General]

Power consumption ..... 200 W
Dimensions ..... W: 270 mm (10-5 / 8")
H : 124 mm (4-7 / 8")
D : 320 mm (12-5 / 8")
Weight (net) ..... 6.5 kg (14.3 lb)

Note

KENWOOD follows a policy of continuous advancements in development. For this reason specifications may be changed without notice.

Strömbrytarens POWER beredskapsläge

Indikatorn STAND BY tänds efter nätkabelns anslutning till ett vägguttag, oavsett strömbrytarens POWER till/frånslag. Detta anger att en liten mängd ström leds till komponenten som stöd för minnesinnehållet.
Detta läge kallas för beredskapsläget. Strömbrytaren på fjärrkontrollen kan användas för att slå på och av strömmen as länge indikatorn STAND BY lyser.

Virtanäppäimen (POWER) valmiustila (STAND BY)

Kun laitteen verkkojohto on liitetty pistorasiaan, valmiustilan merkkivalo syttyy riippumatta virtanäppäimen (POWER) asennosta (ON / OFF).
Merkkivalo osoittaa, että laitteessa on hieman virtaa muistin sisältöjen ylläpitoa varten. Tätä tilaa kutsutaan valmiustilaksi. Kun valmiustilan merkkivalo (STAND BY) palaa, laitteen virta voidaan kytkeä ja katkaista kaukosäätimellä.

Afbrydertastens (POWER) STAND BY funktion

Når apparatets strømledning er tilsluttet en stikkontakt, lyser STAND BY indikatoren, uanset om der er tændt ved afbryderen på apparatet eller ej. Det angiver, at apparatet bliver forsynet med en ganske lille mængde strøm til opret-holdelse af hukommelsens indhold.
Denne funktion kaldes STAND BY. Når STAND BY indikatoren er tændt, kan strømmen til apparatet slås til og fra med fjernsty-ringsenheden.

PÅ/AV-knappens Stand-by funksjon

Når strømledningen til dette anlegget er satt i en vekselstrømskontakt, vil STAND-BY indikatorlampen lyse enten PÅ/AV-knappen er på-eller avslått. Dette betyr at en viss mengde strøm tilføres anlegget slik at innholdet i minnet ikke går tapt.
Denne funksjonen kalles Stand-by. Når indikatorlampen for STAND-BY er tent, kan strømmen slås PÅ / AV fra fjernkontrollen.

Specifications (For U.S.A. and Canada)

Pre Amplifier / Tuner unit (C-E9)

FM Tuner section

Tuning frequency range ..... 87.5 MHz ~ 108 MHz
Sensitivity (IHF) ..... 13.2 dBf (1.2 μV at 75 Ω)
Signal to noise ratio at 1 kHz
MONO ..... 75 dB (65 dBf input)
STEREO ..... 68 dB (65 dBf input)
Selectivity (IHF ± 400 kHz) ..... 50 dB
Stereo separation (IHF at 1 kHz) ..... 40 dB
Frequency response ..... 30 Hz ~ 15 kHz + 0.5 dB, – 3 dB

AM Tuner section

Tuning frequency range ..... 530 kHz ~ 1,700 kHz
Usable sensitivity ..... 12 μV / (500 μV / m)
Signal to noise ratio ..... 48 dB

Pre Amplifier section

Total harmonic distortion
..... 0.006 % (SOURCE DIRECT, 1 kHz, 200 mV)
Input sensitivity / Impedance
MD / DAT, VIDEO, AV AUX ..... 200 mV / 47 kΩ
MIC ..... 1.3 mV / 47 kΩ
N.B. circuit ..... + 8 dB (max.) (60 Hz)
Output level / Impedance
MD / DAT, VIDEO ..... 200 mV / 2.2 kΩ

VIDEO section

Input level / Impedance
VIDEO (composite) ..... 1 Vp-p / 75 Ω Input (VIDEO, AV AUX)
Output level / Impedance
VIDEO (composite) ..... 1 Vp-p / 75 Ω Output (MONITOR OUT,VIDEO)

[General]

Dimensions ..... W: 270 mm (10-5 / 8")
H : 104 mm (4-1 / 8")
D : 328 mm (12-15 / 16")
Weight (net) ..... 2.5 kg (5.5 lb)

Power Amplifier / Graphic equalizer unit (B-E9)

Power amplifier section

Rated power output

STEREO MODE

65 watts per channel minimum RMS, both channels driven, at 6 Ω from 40 Hz to 15 kHz with no more than 0.08 % total harmonic distortion.

SURROUND MODE
FRONT ..... 70 W + 70 W (1 kHz, 6 Ω)
CENTER ..... 10 W (1 kHz, 8 Ω)
REAR ..... Total 6 W (1 kHz, 8 Ω)
Total harmonic distortion
..... 0.02 % (1 kHz, 1 / 2 Rated power, 6 Ω)
Frequency response
..... 20 Hz ~ 70 kHz, + 0 dB, – 1.0 dB
Signal to noise ratio
..... 105 dB (IHF'66)
Input sensitivity / Impedance
..... 1.0 V / 47 kΩ
Output level / Impedance
SUPER WOOFER PRE OUT ..... 2.0 V / 600 Ω
OMNI PRE OUT ..... 2.2 V / 600 Ω

Graphic equalizer section

Individual channel ..... 63 Hz, 160 Hz, 400 Hz, 1 kHz, 2.5 kHz, 6.3 kHz, 16 kHz
Equalizer characteristic variable range
..... ± 10 dB

[General]

Power consumption ..... 2.2 A
Dimensions ..... W: 270 mm (10-5 / 8")
H : 124 mm (4-7 / 8")
D : 320 mm (12-5 / 8")
Weight (net) ..... 6.5 kg (14.3 lb)

Note

KENWOOD follows a policy of continuous advancements in development. For this reason specifications may be changed without notice.

For the U.S.A.

FCC WARNING

This equipment may generate or use radio frequency energy. Changes or modifications to this equipment may cause harmful interference unless the modifications are expressly approved in the instruction manual. The user could lose the authority to operate this equipment if an unauthorized change or modification is made.

NOTE:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment may cause harmful interference to radio communications, if it is not installed and used in accordance with the instructions. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

-- Reorient or relocate the receiving antenna.
-- Increase the separation between the equipment and receiver.
-- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
-- Consult the dealer or an experienced radio / TV technician for help.

Specifications (For other countries)

Pre Amplifier / Tuner unit (C- E9)

FM Tuner section

Tuning frequency range ..... 87.5 MHz ~ 108 MHz
Sensitivity (IHF) ..... 13.2 dBf (1.2 μV at 75 Ω)
Signal to noise ratio at 1 kHz
MONO ..... 75 dB (65 dBf input)
STEREO ..... 68 dB (65 dBf input)
Selectivity (IHF ± 400 kHz) ..... 50 dB
Stereo separation (IHF at 1 kHz) ..... 40 dB
Frequency response ..... 30 Hz ~ 15 kHz + 0.5 dB, – 3 dB

AM Tuner section

Tuning frequency range
9 kHz step ..... 531 kHz ~ 1,602 kHz
10 kHz step ..... 530 kHz ~ 1,610 kHz
Usable sensitivity ..... 12 μV / (500 μV / m)
Signal to noise ratio ..... 48 dB

Pre Amplifier section

Total harmonic distortion
..... 0.006 % (SOURCE DIRECT, 1 kHz, 200 mV)
Input sensitivity / Impedance
MD / DAT, VIDEO, AV AUX ..... 200 mV / 47 kΩ
MIC ..... 1.3 mV / 47 kΩ
N.B. circuit ..... + 8 dB (max.)
(60 Hz)
Output level / Impedance
MD / DAT, VIDEO ..... 200 mV / 2.2 kΩ

VIDEO section

Input level / Impedance
VIDEO (composite) ..... 1 Vp-p / 75 Ω
Input (VIDEO, AV AUX)
Output level / Impedance
VIDEO (composite) ..... 1 Vp-p / 75 Ω
Output (MONITOR OUT,VIDEO)
[General]
Dimensions ..... W: 270 mm (10-5 / 8")
H : 104 mm (4-1 / 8")
D : 328 mm (12-15/16")
Weight (net) ..... 2.5 kg (5.5 lb)

Power Amplifier / Graphic equalizer unit (B-E9)

Power amplifier section

Rated power output

STEREO MODE
..... 80 W + 80 W (EIAJ, 6 Ω)

SURROUND MODE
FRONT ..... 75 W + 75 W (EIAJ, 6 Ω)
CENTER ..... 10 W (EIAJ, 8 Ω)
REAR ..... Total 6 W (EIAJ, 8 Ω)
Total harmonic distortion
..... 0.02 % (1 kHz, 1 / 2 Rated power, 6 Ω)

Frequency response
..... 20 Hz ~ 70 kHz, + 0 dB, – 1.0 dB
Signal to noise ratio
..... 105 dB (IHF'66)
Input sensitivity / Impedance
..... 1.0 V / 47 kΩ
Output level / Impedance
SUPER WOOFER PRE OUT ..... 2.0 V / 600 Ω
OMNI PRE OUT ..... 2.2 V / 600 Ω

Graphic equalizer section

Individual channel ..... 63 Hz, 160 Hz, 400 Hz,
1 kHz, 2.5 kHz, 6.3 kHz, 16 kHz
Equalizer characteristic variable range
..... ± 10 dB
[General]
Power consumption ..... 200 W
Dimensions ..... W: 270 mm (10-5 / 8")
H : 124 mm (4-7 / 8")
D : 320 mm (12-5 / 8")
Weight (net) ..... 6.5 kg (14.3 lb)

Note

KENWOOD follows a policy of continuous advancements in development. For this reason specifications may be changed without notice.

For the U.S.A.

Note to CATV system installer:

This reminder is provided to call the CATV system installer's attention to Article 820-40 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

Specifications

Cassette deck unit (X-E9)

Track ..... 4-track, 2-channel stereo
Recording system ..... AC bias system
(Frequency: 105 kHz)
Heads
A deck Playback head 1
B deck Playback / recording head 1
Erasing head 1
Motors
A deck 1
B deck 1
Fast winding time ..... Approx. 110 seconds
(C-60 tape)
Frequency response
Normal tape ..... 35 Hz to 17,000 Hz, ± 3 dB
CrO_2 tape ..... 35 Hz to 18,000 Hz, ± 3 dB
Metal tape ..... 35 Hz to 18,000 Hz, ± 3 dB
Signal to noise ratio
Dolby C NR ON ..... 73 dB (Metal tape)
Dolby B NR ON ..... 66 dB (Metal tape)
Dolby NR OFF ..... 58 dB (Metal tape)
Harmonic distortion ..... Less than 3.2 %
(315 Hz, 3rd H.D., 250 nWb / m, metal tape)
Wow and flutter ..... 0.09 % (W.R.M.S.)
± 0.19 % (DIN)
[General]
Dimensions ..... W: 270 mm (10-5 / 8")
H : 124 mm (4-7 / 8")
D : 258 mm (10-3 / 16")
Weight (net) ..... 2.8 kg (6.2 lb)

CD player unit (DP-ME9)

Laser ..... Semiconductor laser
Playing rotation ..... 200 rpm ~ 500 rpm (CLV)
Signal to noise ratio ..... More than 93 dB
Total harmonic distortion
..... Less than 0.01 % (at 1 kHz)
Channel separation ..... More than 85 dB (at 1 kHz)
Wow & Flutter ..... Unmeasurable Limit
Digital output
Optical ..... - 15 dBm ~ -21 dBm
(Wave length 660 nm)
[General]
Dimensions ..... W: 270 mm (10-5 / 8")
H: 104 mm (4-1 / 8")
D: 320 mm (12-5 / 8")
Weight (net) ..... 4.0 kg (8.8 lb)

Speakers (LS-E9)

Enclosure ..... Bass-reflex type
Speaker configuration ..... 3-Way system
Woofer ..... 140 mm, cone type
Midrange ..... 80 mm, cone type
Tweeter ..... 25 mm, dome type
Impedance ..... 6 Ω
Maximum input level ..... 80 W
Frequency response ..... 40 Hz ~ 20,000 Hz
[General]
Dimensions ..... W: 220 mm (8-11 / 16")
H : 470 mm (18-1 / 2")
D : 282 mm (11-1 / 8")
Weight (net) ..... 6.5 kg (14.3 lb) (1 piece)

Note

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